License Tracker

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LT-Analyzer User Manual

Version 3.3

May 31 2011

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LT Analyzer 3.3 User Manual

This is the end-user manual for *LT Analyzer 3.3*.

Administration information is available in the *LT Analyzer 3.3 Administration Manual*.

Document History

LT Analyzer 3.3 May 2011

Minor Release

Introduction of Account Model

Integration with LDAP

Database upgrade

Interface upgrades

Changed name of product from *License Tracker* to *LT Analyzer*

LT Analyzer 3.2, July 2009

Minor Release

Introduction of Project Reporting

Introduction of Token-Based Reporting

Introduction of Enhanced Debug Log (.enh)

Introduction of attributes to Feature Model

Introduction of Global Licenses.

Introduction of Project Reporting

Introduction of Session Source Model

License Tracker 3.1 August 2008

Minor release.

Introduction of time-variable end-user attributes.

Introduction of tree view and sort of data.

License Tracker 3.0 November 2007

Major release.

Introduction of centralized MySQL and Oracle databases and administration.

Administration capability removed from end-users.

License Tracker 2.8, January 2007

Minor release.

Miscellaneous improvements to reports and charts. Support for new log formats.

Legal Notifications

This section details various legal notifications.

Trademarks

IBM LUM™, Flexlm™, License Tracker™, LT Analyzer™, MySQL™, Oracle™, Petrel™, Novell™, Reprise ™, Windows™, Solaris™, Linux™, MS-Access™, and **Sentinel™** are product names that are mentioned for identification purposes only and are trademarks of their respective owners.

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About this Document

This section describes this manual.

Purpose of this Document

The purpose of the **LT Analyzer User Manual** is to explain the *LT Analyzer* application clearly and effectively so you can use it to produce reports and analyze your license usage data.

This document also describes the procedures for using *Web Tracker*. Web Tracker helps you streamline the process of building and displaying comprehensive usage reports.

A separate manual, the **LT Analyzer Administration Manual**, discusses the creation and maintenance of *LT Analyzer* databases, model management, scope management, and automating *LT Analyzer* with **AutoTracker**.

Audience

This document is intended for end-users of *LT Analyzer*.

Generally end-users need to generate reports that help them track the cost and usage of licensed software. End-user responsibilities, at corporate and local level, are varied but often include:

- maximizing the value of software assets,
- managing and forecasting software license usage,
- reducing software maintenance costs,
- optimizing software license agreements, and
- administering fair departmental billing.

This document is not intended for administrators of the license usage data. For more information on administration functions please see the **LT Analyzer 3.3 Administration Manual**.

End-users who wish capture and use license information locally should also refer to the **LT Analyzer 3.3 Administration Manual**.

Conventions used in this Document

This document follows these conventions:

- Buttons and menu items are referenced in bold font, for example, **File**, or displayed as a screen capture.
- Menu paths are also displayed in bold font, for example, **File > Create File DB...**.
- References to the *LT Analyzer* application, the *Web Tracker* module, the *Auto Tracker* module, the *Auto Tracker Alerts* module and the *LT Analyzer Manual* are displayed in italics.
- In the sections that follow, references to the *LT Analyzer* application, the *Web Tracker* module, the *Auto Tracker* module and the *Auto TrackerAlerts* module are shortened to *LT Analyzer*, *Web Tracker*, *Auto Tracker* and *Auto Tracker Alerts* respectively.
- Clickable links such as cross references and Internet addresses are in blue font.
- Critically important information that affects the proper functioning of the software or the report generated is prefaced by the word **IMPORTANT**. For example:

  IMPORTANT: *An example of IMPORTANT information.*

- Clarifications and reminders are generally prefaced by the word **NOTE**. For example:

  NOTE: *An example of a note or clarification.*

- Graphic changes between minor releases are marked as **UPDATED**. New user interface elements are marked as **NEW**. Graphic changes between the last minor release and a new major release are not flagged in any way.
- User input, generally on the command line or in a dialog is in Courier font. For example `This is text entered in a dialog or the command line.`

Menu Items and Dialogs

The pull-down menus and dialogs in the *LT Analyzer* screen follow these conventions:

- Menu items that are:
  - Followed by dots (for example, **Reports...**) open a dialog where you enter information.
  - Followed by an arrow display a pull-down menu with further options from which you select one item.
  - Without arrows or dots (for example, **Users**) immediately display the selected item.

- Check boxes are used as toggles to turn a parameters **ON** or **OFF**. A parameter or filter is active when it contains a check mark. Click in the box to place the check mark and click again in the box to deselect it.
- In dialogs there are areas that:
  - List items in a common category, for example users or licenses. These lists usually allow selection using the mouse and the **SHIFT** or **CONTROL** key. To select a single item, click on it. To select items in sequence, use the mouse and the **SHIFT** key. To select items out of sequence, use the mouse and the **CONTROL** key.
  - Display headings in a table format. These usually require some type of data entry using a button located near the window, for example **ADD,** or direct input using the keyboard.
  - Text fields require a typed response or a button click.
  - To fill in directory location and filename fields, for example **User Model**, click on **Browse...**.

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Fundamental Concepts

This section provides an overview of the fundamental concepts that must be understood to use *LT Analyzer*.

LT Analyzer analyzes a variety of software usage log formats generated by most high-value software packages. These log files are typically generated by license managers used to control access to the software packages, or in some cases they are directly generated by the software packages themselves.

LT Analyzer processes the supported log files and inserts the usage data into a *LT Analyzer* database.

Once the log information is captured in a database in a standard format, *LT Analyzer* can analyze the data further and generate useful cost and license usage information. This information, captured in reports and charts, can then be used for controlling and reviewing license usage and cost.

Users and administrators need to understand several key concepts to make effective use of the capabilities built into *LT Analyzer*. These concepts include log files, content scopes, report scopes, filters, models, administrator versus end-users and server databases versus file databases.

Log Files

Software license usage is recorded in log files (session login and logout times, denial of access, server startup and other events) on a continual basis. These data must be imported into *LT Analyzer* before any usage analysis can be performed. The supported log formats are:

Table 1: LT Analyzer Supported Log File Formats

Format
FLEXlm™ Debug Log
FLEXlm™ Enhanced Debug Log
FLEX RIF Report
Reprise™ Report

Format
Petrel™ Usage Report
Petrel™ SLOG Report
IBM LUM™ Report
Sentinel™ Log
License Tracker™ ASCII Log
License Tracker™ Binary Log

Content Scopes

The concept of scopes is fundamental to getting the most value from *LT Analyzer* and *Web Tracker*.

From a technical point of view a content scope is simply a view into the database. It allows administrators to specify exactly the data that should be extracted and analyzed to produce reports and charts. In *LT Analyzer*, a content scope is a fairly coarse definition of a subset of the whole database.

Administrators define scopes for end-users. Typically a content scope will be used to provide the end-user access to all of license information for a particular location (Houston or Calgary), a management unit (Division 1, Division 2), or a particular vendor (Vendor A, Vendor B) or some combination of categories and attributes for users and features.

Defining a set of content scopes users will want to use has a significant impact on the load that will be placed on a server database. If every end-user has access to a useful content scope, then every report generated will require searching a dataset much smaller than the whole database.

Once an end-user selects a predefined content scope that best applies to them, the data can be further refined by the end-user with filters.

Report Scopes

Report scopes are used to specify the contents for a set of Web Tracker reports. They are used primarily as a control mechanism when using the Auto Reporter function of Auto Tracker to generate many (potentially different) sets of Web Tracker reports.

From a technical point of view a **report scope** is simply a definition of the contents for a set of Web Tracker output. It allows administrators to specify which of types of reports (feature, user, group and analyses) should be produced, as well as which components of the selected reports are to be produced. The **report scope** also allows an administrator to specify which user categories are to be included in the group reports and the group analysis component of the feature reports.

Defining a set of report scopes recognizes that different information is needed for various usage analysis requirements, and more importantly that certain reports are not needed for many purposes. Typically an organization will create a **report scope** specifying all reports and then create other **report scopes** reducing the number of reports generated (and therefore the computation time required to generate the set of Web Tracker reports) for specific purposes.

Once an end-user selects a predefined report scope that best applies to their Web Tracker reporting needs, they can further refine the report set definition in the Web Tracker report selection dialog.

Filters

Filters, like content scopes, also define a subset of data but at a finer level of detail. Filters are generally applied to data that has already been limited by a content scope defined by the administrator.

End-users generally select a scope that best applies to their situation, for example, a location such as “Calgary”. Within this content scope they can filter the data to define finer grained report criteria, for example specific users, groups, vendors, or features.

This combination of content scope and filter accomplish two objectives simultaneously:

1) Filters allow end-users complete freedom in defining exactly what information appears in their reports, based on any criteria available in the data.

2) Content scopes allow administrators to define commonly used views into the database.

End-users can apply filters to the entire database if they wish. If end-users do this frequently it may indicate that there is a mismatch between the existing content scopes and end-users reporting requirements. The easiest way to determine what the problem is to talk to end-users who apply filters to the entire database.

Models

LT Analyzer makes extensive use of

- user,

- feature,
- license
- budget, and
- session source

models in its interaction with software usage databases.

These models either:

- Add attributes to data captured from log files that can be used to refine a query (for example, Business Unit and Role associated with userIDs) or to control a computation (for example, a false denial threshold).
- Add information to data captured from log files that enhances understanding of the raw data in reports (for example, what is the first name, last name and telephone number for each userID).

All of these models are managed by the *LT Analyzer* administrator. They are important because they determine to a large extent what can appear in a *LT Analyzer* report.

Creating an *LT Analyzer* database usually involves collecting and assembling information in a user model, feature model, license models and budget models as well as importing the log files that will provide the basic data for the *LT Analyzer* reports and charts.

Strictly speaking, only the log files are required before generating reports, but most organizations will want to access the reports based on information captured in the user model, feature model, license models and budget models.

The models can be prepared in other tools and imported as comma-separated value (CSV) files or created and modified with the *LT Analyzer* editors. The user model, feature model, license model and budget model files can be edited from within *LT Analyzer* -- this is the normal way of editing these files. However, `.csv` files can be built using other tools and then imported into *LT Analyzer*. This capability may be useful when setting up reporting for large numbers of users and groups.

You can obtain the information for a model from a computer-account-management system by exporting a `.csv` file containing the required information, and then edit the file in a spreadsheet program to ensure the correct column order and headings.

You can also create a model file from an existing database using the export option, for example, **File > Export > User Model...**. Models created in one database can be exported for use in creating other databases in the future.

User Model

The user model is a simple ASCII `.csv` file. It links a userID, called a **User Name,** found in the license usage data to a user's

- first name,
- last name,
- e-mail address, and
- phone number,
- and two built-in comment fields.

All of these fields in the user model provide information which is displayed in the header of the *Web Tracker user reports.*

The default user model contains the following headings on the first line of the ASCII file. These heading names are reserved and significant to *LT Analyzer*. Heading order is not important in the model.

User Name

The computer login name (that is, the userID) found in the license server log files. UserName is the only required heading in a user model.

First Name

The real first name of the user.

Last Name

The real last name of the user.

Account Name

The name of the account that this user belongs to.

Email Address

The user's e-mail address.

Phone Number

The user's phone number.

Comment 1

A comment about the user.

Comment 2

A comment about the user.

Date

The date from which the user attributes specified in this row are valid.

Other headings may be added to the model by an administrator. These are treated as category names by *LT Analyzer*. For example:

- **Category_1** ... **Category_n**

Categories (also known as group types) correspond to extra, administrator-defined columns in the **user model**. Category names usually correspond to something significant to the organization tracking license use.

Each cell in a category column is an attribute (also known as a group) that can be used to further refine categorization. For example, the category "Location" might be subdivided with the attributes "Calgary", "Houston", and "Denver".

A sample user model is found at `samples/sample_UM.csv` in the *LT Analyzer* software folder. The sample contains all of the headings from the default model and some category columns with attributes entered in the cells. Example categories included in the sample **user model** file are "Location", "Division", and "Role".

User models are most often generated by exporting information from an LDAP or other account management system to a CSV file. Some modification of the headings may be required to make them match *LT Analyzer* user model requirements. Starting with version 3.3 of LT-Analyzer, it is possible to create connections to an LDAP system in order to automatically import user information into the user model.

There is one user model per *LT Analyzer* database.

Feature Model

The feature model is a simple ASCII `.csv` file. It specifies features (or software packages) found in the log files. Each row in the Feature Model corresponds to one feature, and the column headings are as follows:

Vendor Name

The name of the software vendor that licenses the software feature.

Feature Name

The name of the feature that the row represents

Sharing Strategy

The license sharing strategy used with this feature.

False Denial Threshold

The false denial threshold for this feature.

Application Type

The type of application this feature falls into.

Product Name

The name of the product that this feature is part of.

Feature Alias

The feature alias is used in place of the feature name in the interface, reports and charts.

Additional details on the column headings are provided below.

License Sharing Strategy

The sharing strategy specifies under what conditions *LT Analyzer* should deem multiple user sessions from the log file are using the same license. The license sharing strategies are:

- **No sharing** - There is no license sharing. Each session uses up a license.
- **Host** - If multiple concurrent or overlapping sessions are using a feature from the same host, then only one license is used.
- **User** - If a software feature is being used by concurrent or overlapping session the same user running on the same or different hosts, then only one license is used.
- **User Plus Host** - If a feature is being used by multiple concurrent or overlapping sessions of the same user on the same host, then only one license is used.

Most often, computation intensive features have no sharing while interactive software frequently has user+host sharing (same user at the same computer may have multiple sessions of the software using the same license). Any sharing information provided in the license manager log files will override those specified in the feature model.

False Denial Threshold

Removing denials caused by license server chains or high frequency failed requests can be particularly useful. The false denial threshold is used to control this. A duplicate denial (same feature, same user, same host) found within the threshold of another denial is deemed to be false; also, a denial for which a license is granted (same feature, same user, same host) within the threshold is also deemed false.

Application Type

A software feature can be organized by its function or role. This is the application type. For example, a software feature like Microsoft Word™ is a word processor, so the administrator could set the ApplicationType in the feature model to "WordProcessor". The application type can then be used when creating reports to focus on a particular type of application.

Product Name

Software products are sometimes divided into different features which are licensed separately. For example, a product that uses plugins might have each plugin licensed separately. In this case, the overall product is the Product in the feature model, and the individual plugins are the features. The Product Name is the name of the overall product that a feature is part of.

Feature Alias

Depending on the practices of the software vendor, the software features may have technical or confusing names in the log files. The Feature Alias is used to remove this confusion for *LT Analyzer* users and administrators. The feature alias is assigned in the feature model and is associated with a feature. The alias should be set to a unique, clear name and will replace the feature name in the user interface, reports and charts. This removes confusion for users and administrators.

NOTE: *Note that in the feature model csv, the Feature Alias column is simply called 'Alias'.*

Other headings may be added to the model by an administrator. These are treated as category names by *LT Analyzer*. For example: Category_1 ... Category_n. Categories correspond to extra, administrator-defined columns in the feature model. Category names usually correspond to something significant to the organization tracking license use. Each cell in a category column is an attribute that can be used to further refine categorization.

A sample feature model is found at `samples/sample_FM.csv` in the *LT Analyzer* software folder. The sample contains all of the headings from the default model and some category columns with attributes entered in the cells.

There is one feature model per *LT Analyzer* database.

Session Source Model

The Session Source Model provides details of each log file imported into a *LT Analyzer* database. It has default headings:

Name

The name of the file loaded.

Type

The format of the log file.

Vendor

The name of the vendor whose usage data was in the file.

Import Date

The date the file was loaded into the *LT Analyzer* database.

Start Date

First date in the log file.

End Date

Last date in the log file.

Sessions Read

Number of sessions read from the file

Sessions Loaded

Number of sessions actually loaded (may have been filtered out due to date, length, etc.).

Server

Name of the license server that this log file came from.

Other headings may be added to the model by an administrator. These are treated as category names by *LT Analyzer*. For example:

- Category_1 ... Category_n

Categories correspond to extra, administrator-defined columns in the session source model.

Each cell in a category column is an attribute that can be used to further refine categorization. For example, the category “ServerLocation” might be subdivided with the attributes “Kuala Lumpur”, "Calgary" and “London”.

License Models

The license model is a simple ASCII `.csv` file. It links feature names found in the log files to

- vendor names,
- the number of licenses owned,

- the ownership cost of licenses (average purchase and maintenance cost per license), and
- software rental details
  - rental rates: yearly, monthly, weekly, daily, or hourly;
  - rental mode: (by the second, hourly, capped, etc.) and
  - minimum duration of sessions that are to be considered when calculating rentals.

Multiple license models can be created for different financial analyses of the software usage data.

NOTE: *License models are associated with content scopes and will not be considered in any analyses until such an association is created. A single license model may be associated with multiple content scopes.*

A license model contains the headings listed below on the first line of the ASCII file. Only the **Feature Name** and **License Count** headings are required. If more than one line are in a license model for a single feature then they must have different valid "from" dates.

Vendor Name

The vendor's name. This is only used for adding new features found in the license model to the feature table of the *LT Analyzer* database. If the feature is already in this table then the contents of this field are ignored.

Feature Name

The software feature name as found in the license server log files.

Date

This is the date from which the data on this line is valid. This is to support the fact that license counts and costs change over time. Use the format YYYY-MM-DD.

License Count

The number of licenses purchased (owned, not rented).

Product Cost

The average cost to purchase a single license.

Maintenance Cost

The average annual maintenance fee for a single purchased license.

Annual Cost

The annual rental license fee.

Monthly Cost

Monthly rental license fee.

Weekly Cost

Weekly rental license fee.

Daily Cost

Daily rental license fee.

Hourly Cost

The hourly rental license fee. If rental billing is by the second, provide the hourly rate (PerSecondRate x 3600) in this column.

Mode

The type of rental mode. The rental mode, options are:

- NONE
- SESSION
- ANNUAL
- MONTHLY
- DAILY
- HOURLY
- HOURLY_CAPPED. If total hourly rentals exceed monthly rental costs then a monthly rental is added and hourly rentals are recalculated; superseded by HR_CAP_MON.
- HR_CAP_MON. If total hourly rentals for a single rented license exceed monthly rental costs then it is deemed to be rented for the month and hourly rentals are recalculated.
- SECOND
- SC_CAP_MON. If billing by the second for a single license exceeds the monthly rate then the license is deemed to be rented by the month and by the second rentals are recalculated.

Minimum Duration

This is minimum session length (in seconds) to be considered when calculating rental costs. All sessions shorter in duration will be ignored.

NOTE: *The last six columns in the license model file refer to rental fees (annual, monthly, weekly, daily and hourly rates), and minimum duration. The mode indicates which rental model should be used by LT Analyzer. If you do not use rental licenses, then leave these columns blank in your file.*

A sample license model is found at `samples/sample_LM.csv` in the *LT Analyzer* software folder.

Budget Models

The budget model is a simple ASCII `.csv` file. It is a simple list of the budgeted rental costs per month in an organization; if your organization does not have software rental arrangements with any of your software vendors then you will not need to create or use budget models.

Multiple budget models can be created for specific views of the software usage data. A typical example is a budget model for each budgeting unit in a corporation, or for rental budgets for specific software vendors.

NOTE: *Budget models are associated with content scopes and will not be considered in any analyses until such an association is created. A single budget model may be associated with multiple content scopes.*

A budget model must contain the following headings on the first line of the ASCII `.csv` file:

Year

The year of the data.

Month

The actual calendar month name.

Amount

The money allotted to license usage for each month.

A sample budget model is found at `samples/sample_BM.csv` in the *LT Analyzer* software folder.

Types of Users

All users have administrative privileges for file databases.

Users who do have administration privileges on the *LT Analyzer* database do have access to the **Admin** menu.

From *LT Analyzer* **Admin** menu administrators can:

- import and delete software usage data,
- create and manage user, license, budget and feature models, and
- create and manage report scopes and content scopes for the organization.

Administrators can also use *LT Analyzer* as an end-user themselves.

LT Analyzer administrator privileges are also required to configure and run Auto Tracker.

Accounts

Accounts are used to organize which users are charged, and how. Users are charged for use of software based on which account they belong to. Each account has its own license model which describes how the licenses and charges are to be applied to users in that account. A user does not have to belong to an account, but only users that belong to an account will be included in usage charges - any users not in an account will not be charged. Users can belong to only one account, or none.

Charges are calculated for each user only when session usage data is imported into the *LT Analyzer* database. If the accounts are edited or changed (by the administrator, for example) the account charges will be out of date. In this case, the transaction data will need to be deleted from the *LT Analyzer* database and reloaded.

Token Based Reporting

Traditionally, software vendors have used a feature-based licensing system where the customer purchases or rents a certain number of per-user licenses for each software feature provided by the vendor.

This model creates the situation where at certain stages of business activity, one feature might run out of licenses while another does not, creating a situation where the business must pay for more licenses of one feature while those of an already paid for feature are not used.

A token-based licensing system differs from a feature-based system in that instead of buying licenses for each user, the business buys a certain number of tokens that go into a 'token pool'. The software vendor then defines how many tokens each software feature is worth, and when that software feature is in use by any user, the corresponding number of tokens is removed from the pool. When the user stops using the software, the tokens are added back into the pool. When a user tries to use a piece of software, the token pool is checked to see if there are enough tokens. If so, the user is allowed to use the software, if not, the user is denied.

LT Analyzer version 3.2 and above allows for the analysis and tracking of this sort of license model. Typically with a token model, it is only possible to analyze the usage of the tokens. With *LT Analyzer* it is possible to track the actual usage of each software feature within a token pool.

Project Reporting

Frequently software usage is associated with a specific project within an enterprise. Whenever this information is provided in a log file *LT Analyzer* will capture this information and store it in its database. This information can then be used to divide software costs among projects within the enterprise.

Global Licenses

Software vendors can purchase a **Global License** of *LT Analyzer*. This license allows the vendors to use the *LT Analyzer* toolset within their organization and to provide *LT Analyzer* to their customers.

In order to make use of a Global License, a customer must download a **Vendor-Specific License**, which is provided at no cost from the License Tracker website. The Vendor Specific License is associated with a software vendor that has purchased a Global License, and allows a customer to install and use *LT Analyzer* to analyze license usage data from that vendor, and that vendor only. Multiple vendor specific licenses can be downloaded and installed, allowing the customer to analyze data from multiple vendors using a single *LT Analyzer* database.

Enterprises making use of Vendor-Specific Licenses have complimentary access to the User Manual and the Administrator Manual; access to all other support capabilities (such as User Forum and regularly schedule webinars) requires a separate support contract.

Editions of LT Analyzer

This section describes the editions of *LT Analyzer* available for different data usage requirements.

Server DataBase Edition

The Server DB Edition of *LT Analyzer* maintains its databases by interacting with a database server. The two databases that are supported are: Oracle 10 and MySQL 5. The database server and the *LT Analyzer* software may be running on the same machine, or they may be running on separate machines. A separate license is required for the database server. The Server DB Edition may be used on all platforms supported by the Java Runtime Environment 1.5 (i.e., Windows, Solaris, and Linux).

The Server DB Edition is appropriate for large organizations that need to analyze usage data measured in the hundreds of thousands to millions of user sessions.

File DataBase Edition

The File DB Edition of *LT Analyzer* maintains its databases in MS-Access files. The files are always created and used within the filesystem that is accessible from the user's computer. A separate copy of MS-Access is not required. The File DB Edition can only be used with Windows systems.

The File DB Edition is appropriate for organizations with small or moderate usage analysis volumes measured in the 10,000s to low 100,000s of user sessions.

Limited Edition

The Limited Edition of *LT Analyzer* is a special version of the File DB Edition. This is the default mode of *LT Analyzer* when started without a *LT Analyzer* license. The Limited Edition restricts all databases to a maximum of 10 users and 15 software features. In addition, the Limited Edition does not provide access to the Auto Tracker capabilities.

The Limited Edition is appropriate for small organizations with very low software usage. It may also be used for evaluation of the *LT Analyzer* product.

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Starting LT Analyzer

This section describes the basic procedures for starting-up *LT Analyzer* and setting-up your database.

How to Install *LT Analyzer*

PREREQUISITE The minimum system requirements for running *LT Analyzer* are:

- Windows XP or Windows 7 operating system when accessing file databases (32 bit version of *LT Analyzer* only),
- Windows XP, Windows 7, Linux or Solaris operating systems when accessing server databases,
- 1 GB of RAM, 2 GB is suggested,
- Java run-time environment, version 1.5 or higher, and
- a screen resolution of 1024 X 768 pixels or greater.

To install *LT Analyzer* follow this procedure:

TASK

1. Access the *LT Analyzer* web site `www.licensetracker.ca` and download the zip file onto your hard drive.
2. Extract the following folders from the zip file into a *LT Analyzer* directory:
   - `bin` contains executable files (extension `.jar`), startup scripts and shortcut files.
   - `common` contains images used in the *LT Analyzer* interface. Users should not modify any files in this directory.
   - `conf` this is where you install the license file (extension `.ltilic`).
   - `doc` contains the files for the *LT Analyzer* Admin Manual and User Manual(with extension `.pdf`).
   - `samples` contains sample model and demo files.
3. Install the `<your_license_filename>.ltilic` file in the `conf` folder. This file was e-mailed to you as part of the download and evaluation or purchase process.

4. To start *LT Analyzer*, open the `bin` directory and double-click on:
   - the `LicenseTracker.lnk` shortcut for Windows users
   - the `LicenseTrackerWOW64.lnk` for users running 32-bit Java or who want to open or create a Microsoft Access database.
   - the `LicenseTracker.sh` script file for Linux/Solaris users.

Getting a Valid *LT Analyzer* License

Part of the *LT Analyzer* download process is requesting a demonstration or regular license. You should have received the appropriate license by e-mail from licensetracker.ca before installation.

If you did not receive an e-mail with the appropriate license, please contact sales@licensetracker.ca.

As of version 2.7, the *LT Analyzer* license (`<your_license_filename>.ltilic` in the `conf` directory) is tied to the version number of the software. A new license is required for each new version of the *LT Analyzer* software.

"License not for this release" Problem

If *LT Analyzer* reports an "invalid license" problem when the software is started after an update, follow this procedure.

TASK

1. Reinstall the license file received from *LT Analyzer* as part of the upgrade process. Make sure that you have copied the correct `<your_license_filename>.ltilic` file to the `conf` directory.

   STEP RESULT: If the problem persists go to the next step.

2. Reinstall the software as described in **"How to Install LT Analyzer"** on page 33.

   STEP RESULT: If the problem persists go to the next step.

3. Contact *LT Analyzer* support. **"Support and Contact Information"** on page 123.

Producing LT Analyzer Reports

This section guides you through the procedures that create and display spreadsheet-like reports in *LT Analyzer*.

PREREQUISITE:: *This section assumes that you already understand the fundamental concepts of LT Analyzer. If you are not familiar with LT Analyzer then go to* ***"Fundamental Concepts"*** *on page 17.*

PREREQUISITE:: *This section also assumes that you have opened a database and have selected a content scope.*

The topics include:

- **"About Reports"** on page 35,
- **"The Reports Menu"** on page 35,
- **"How to Change Filter Parameters for Reports and Charts"** on page 40,
- **"How to set the Date Range for Reports or Charts"** on page 42,
- **"Database Summary Reports"** on page 43,
- **"Budget Reports"** on page 53
- **"General Usage Reports"** on page 54, and
- **"Financial Reports"** on page 65

About Reports

The following headings contain descriptions that help you identify the various *LT Analyzer* reports and define the report parameters:

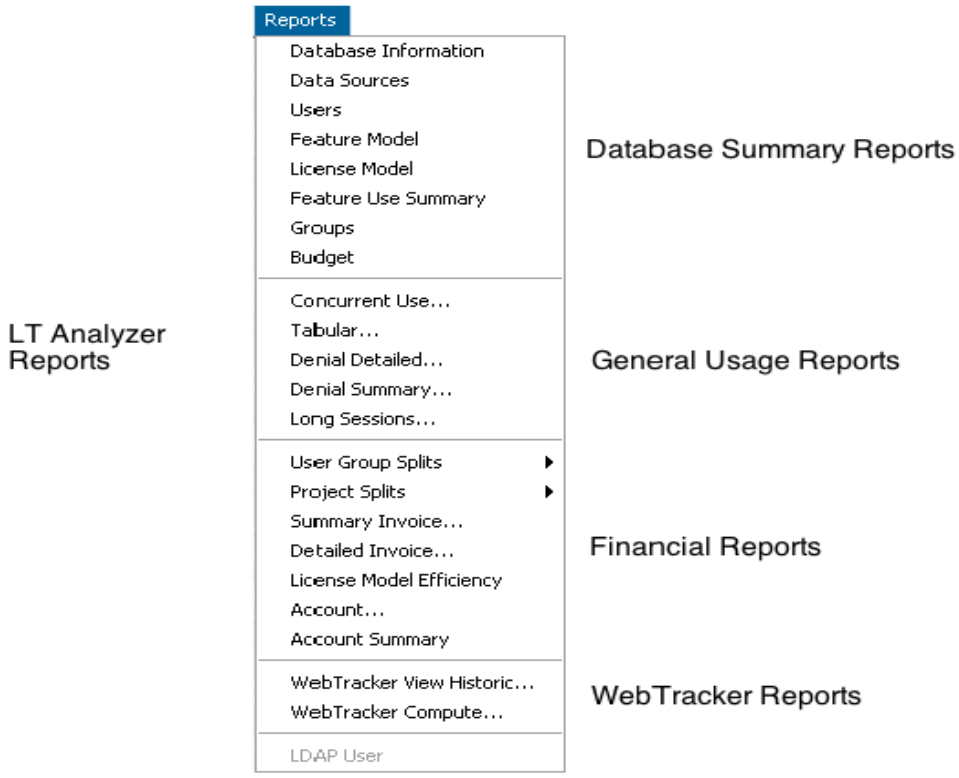
- **"The Reports Menu"** on page 35
- **"How to Change Filter Parameters for Reports and Charts"** on page 40
- **"How to set the Date Range for Reports or Charts"** on page 42

The Reports Menu

LT Analyzer reports are listed under the **Reports** menu item and are clustered by type of report:

- "Database Summary Reports" on page 43,
- "General Usage Reports" on page 54,
- "Financial Reports" on page 65, and
- *Web Tracker* menu items are also listed under **Reports**. Web Tracker generates reports that can be viewed in a web browser. For more information see "Web Tracker" on page 113.

Figure 1: List of *LT Analyzer* Reports



User Interface for Reports

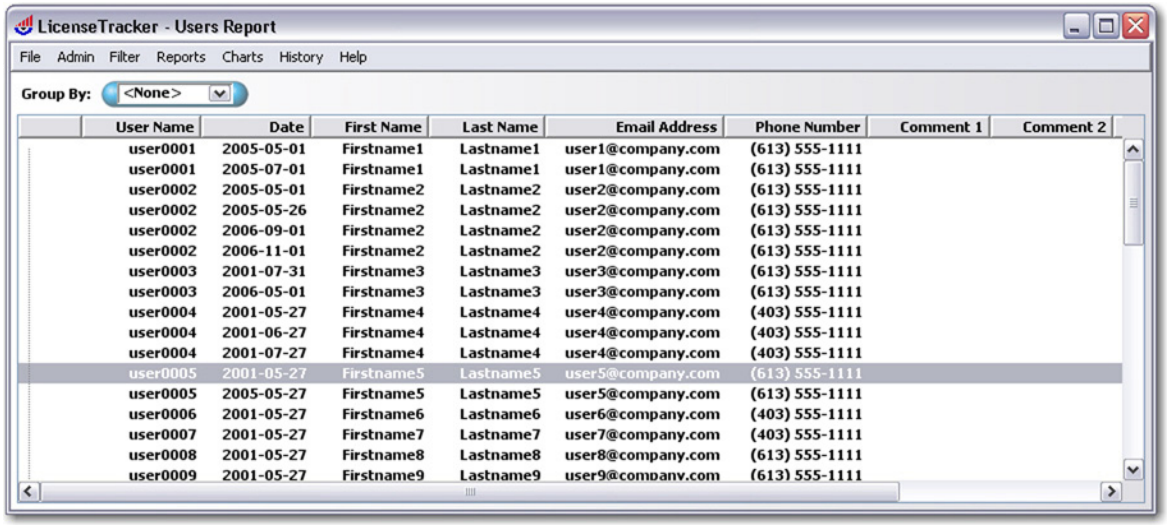
As of release 3.1 LT Analyzer introduced significant changes to the interaction between the end-user and the data displayed in a report. These changes, the "Tree view" or "Explorer view" and the "Group By" widget, are described below.

Changing the presentation of a report with "Tree View" and "Group By"

Most *LT Analyzer* reports consist of tables of data. As of release 3.1 the user can change how data is presented in these tables with the "Group By" widget at the top of the table.

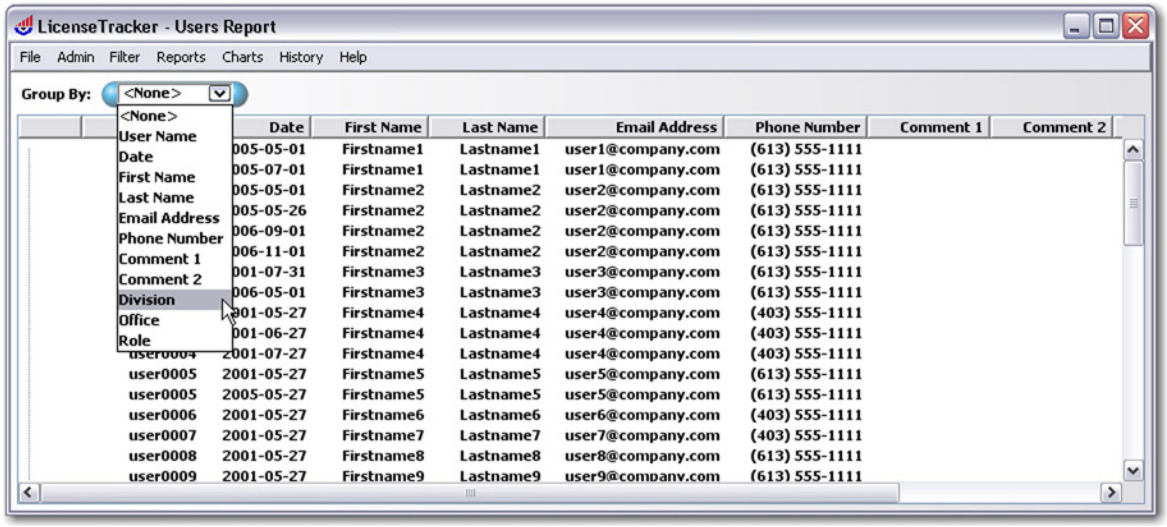
When first displayed, most reports look something like this:

Figure 2: Initial view of a *LT Analyzer* Report (example)


LicenseTracker - Users Report
File Admin Filter Reports Charts History Help
Group By: <None>
User Name Date First Name Last Name Email Address Phone Number Comment 1 Comment 2
user0001 2005-05-01 Firstname1 Lastname1 user1@company.com (613) 555-1111
user0001 2005-07-01 Firstname1 Lastname1 user1@company.com (613) 555-1111
user0002 2005-05-01 Firstname2 Lastname2 user2@company.com (613) 555-1111
user0002 2005-05-26 Firstname2 Lastname2 user2@company.com (613) 555-1111
user0002 2006-09-01 Firstname2 Lastname2 user2@company.com (613) 555-1111
user0002 2006-11-01 Firstname2 Lastname2 user2@company.com (613) 555-1111
user0003 2001-07-31 Firstname3 Lastname3 user3@company.com (613) 555-1111
user0003 2006-05-01 Firstname3 Lastname3 user3@company.com (613) 555-1111
user0004 2001-05-27 Firstname4 Lastname4 user4@company.com (403) 555-1111
user0004 2001-06-27 Firstname4 Lastname4 user4@company.com (403) 555-1111
user0004 2001-07-27 Firstname4 Lastname4 user4@company.com (403) 555-1111
user0005 2001-05-27 Firstname5 Lastname5 user5@company.com (613) 555-1111
user0005 2005-05-27 Firstname5 Lastname5 user5@company.com (613) 555-1111
user0006 2001-05-27 Firstname6 Lastname6 user6@company.com (403) 555-1111
user0007 2001-05-27 Firstname7 Lastname7 user7@company.com (403) 555-1111
user0008 2001-05-27 Firstname8 Lastname8 user8@company.com (613) 555-1111
user0009 2001-05-27 Firstname9 Lastname9 user9@company.com (613) 555-1111

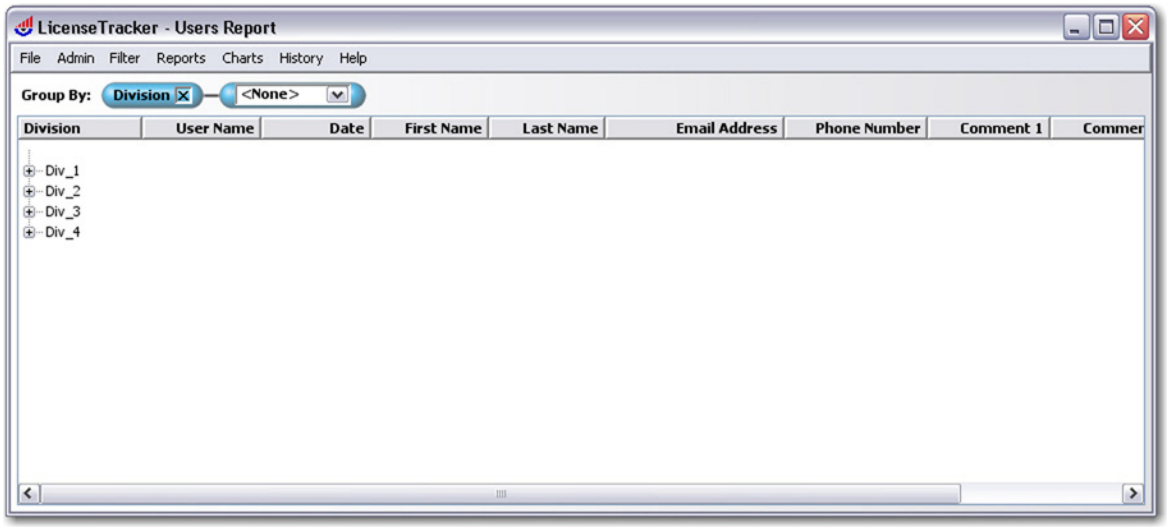
This initial view can be modified by selecting a primary key from the "Group By" drop down list:

Figure 3: Choose a primary key



Choosing the primary key results in the following compressed tree view:

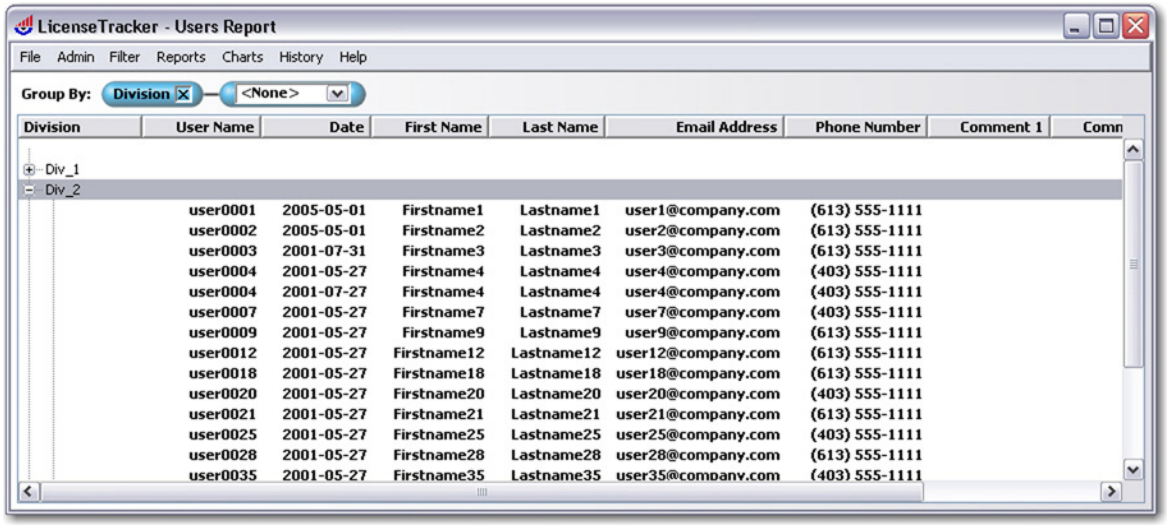
Figure 4: Initial compressed tree view


LicenseTracker - Users Report
File Admin Filter Reports Charts History Help
Group By: Division <None>
Division User Name Date First Name Last Name Email Address Phone Number Comment 1 Commer
Div_1
Div_2
Div_3
Div_4

Note the **+ sign** in front of each primary field.

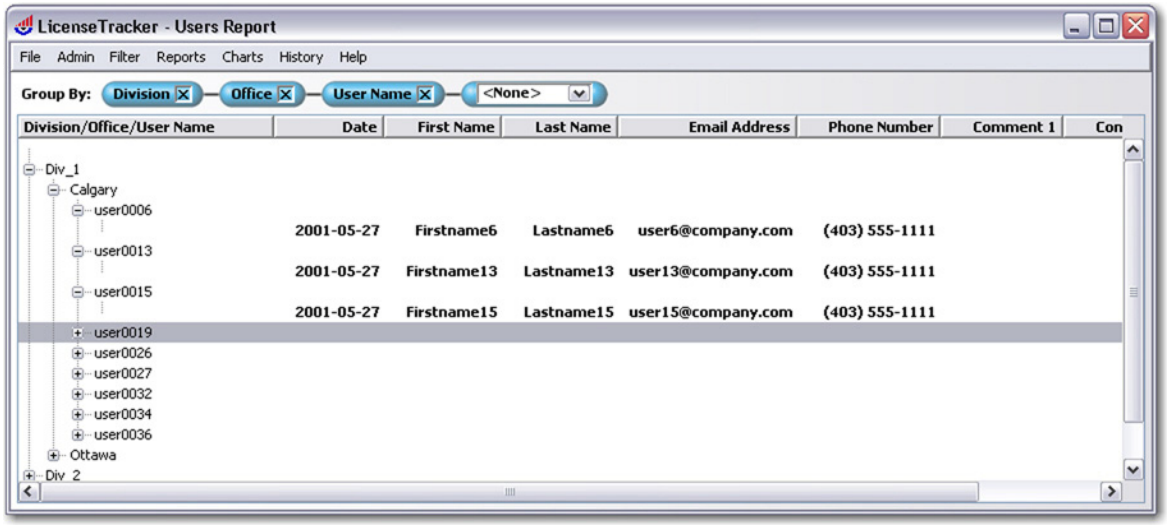
Click on the **+ sign** to expand the rest of the information (the **+ sign** then changes to a **- sign**):

Figure 5: Expanding the tree


LicenseTracker - Users Report
File Admin Filter Reports Charts History Help
Group By: Division <None>
Division User Name Date First Name Last Name Email Address Phone Number Comment 1 Comn
Div_1
Div_2
user0001 2005-05-01 Firstname1 Lastname1 user1@company.com (613) 555-1111
user0002 2005-05-01 Firstname2 Lastname2 user2@company.com (613) 555-1111
user0003 2001-07-31 Firstname3 Lastname3 user3@company.com (613) 555-1111
user0004 2001-05-27 Firstname4 Lastname4 user4@company.com (403) 555-1111
user0004 2001-07-27 Firstname4 Lastname4 user4@company.com (403) 555-1111
user0007 2001-05-27 Firstname7 Lastname7 user7@company.com (403) 555-1111
user0009 2001-05-27 Firstname9 Lastname9 user9@company.com (613) 555-1111
user0012 2001-05-27 Firstname12 Lastname12 user12@company.com (613) 555-1111
user0018 2001-05-27 Firstname18 Lastname18 user18@company.com (613) 555-1111
user0020 2001-05-27 Firstname20 Lastname20 user20@company.com (403) 555-1111
user0021 2001-05-27 Firstname21 Lastname21 user21@company.com (613) 555-1111
user0025 2001-05-27 Firstname25 Lastname25 user25@company.com (403) 555-1111
user0028 2001-05-27 Firstname28 Lastname28 user28@company.com (613) 555-1111
user0035 2001-05-27 Firstname35 Lastname35 user35@company.com (403) 555-1111

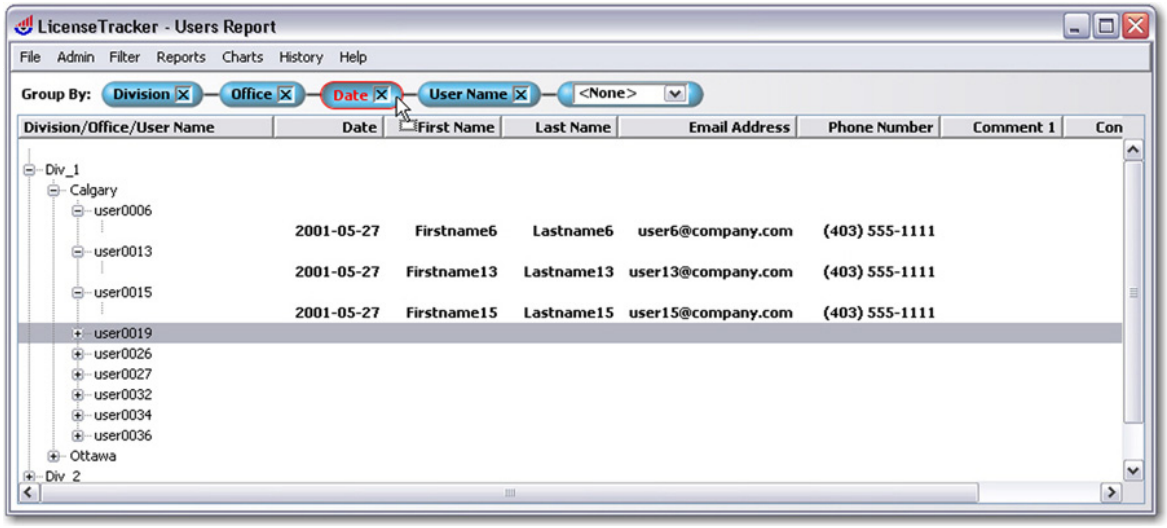
The use of the **Group By** option can be extended even more:

Figure 6: Extended use of the **Group By** option



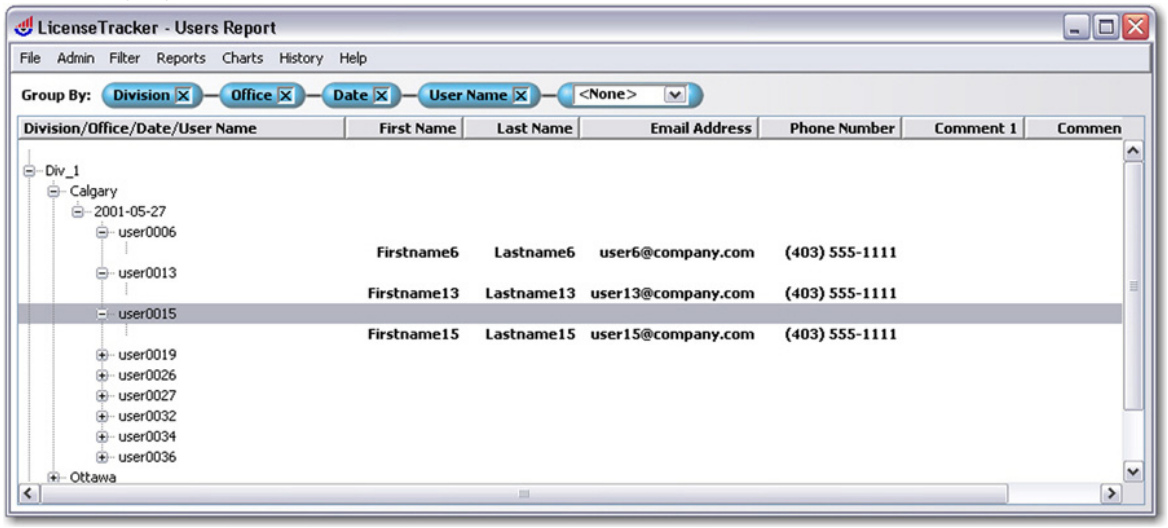
You can change the tree structure by grabbing a heading and dragging it to a new position in the "Group By" line-up:

Figure 7: Changing the tree structure (1)



The resulting tree structure is shown below:

Figure 8: Changing the tree structure (2)



How to Change Filter Parameters for Reports and Charts

In *LT Analyzer*, there are two ways to refine the data that you display in a report or chart, the **filter dialog** and **report-specific parameter** dialogs.

TASK

1. Set data filters in the **Filter > Set Filter... > Select the Filter Parameters** dialog and then click the **Use Filter** button to activate them with a check mark.

   ADDITIONAL INFORMATION: To deactivate the filters, simply click on the Use Filter button again, to remove the check mark and *LT Analyzer* will use all of the data in your database.

   There are two ways to access this dialog:

   a Click **Filter > Set Filter...**.

   b Press the **Filter** button in any report dialog.

   ADDITIONAL INFORMATION: Not all reports display a dialog.

2. Menu items under **Reports** and **Charts** that have dots in the name (for example, **Tabular...**) display a dialog that you must fill in before producing the report or chart.

   a Different dialogs offer different parameters for your selection under the following categories:

Data parameters - usernames, license names, or group names, depending on the reportor chart

Usage parameters - total usage, overage, cost, or concurrent usage

Time parameters - days, months, years, session duration, or time range

b Click the **Filter** button at the bottom of the dialog to display the **Select the Filter Parameters** dialog then click the **Use Filter** button to activate the parameters you have selected.

3. Menu items under **Reports** and **Charts** without dots in the name (**Groups** for example), immediately produce the requested report or chart without displaying a dialog. In these situations, you need to filter your data under **Filter > Set Filter...**.
4. Select the tab of the parameter that you want to set (for example, Features, see **"The Filter Parameter Dialog"** on page 41 below).
5. Move the data that you want to use as a filter (i.e., that you want to use in your report or chart) to the column on the right, using the arrow buttons in the center of the dialog.
6. Similarly, move the data that you do not want to use to the column on the left.

   ADDITIONAL INFORMATION: Please note that, if all data is moved to the left hand side, no filtering of this parameter will take place, i.e., all data will be used in the report or chart.
7. Click on OK.

Figure 9: The Filter Parameter Dialog

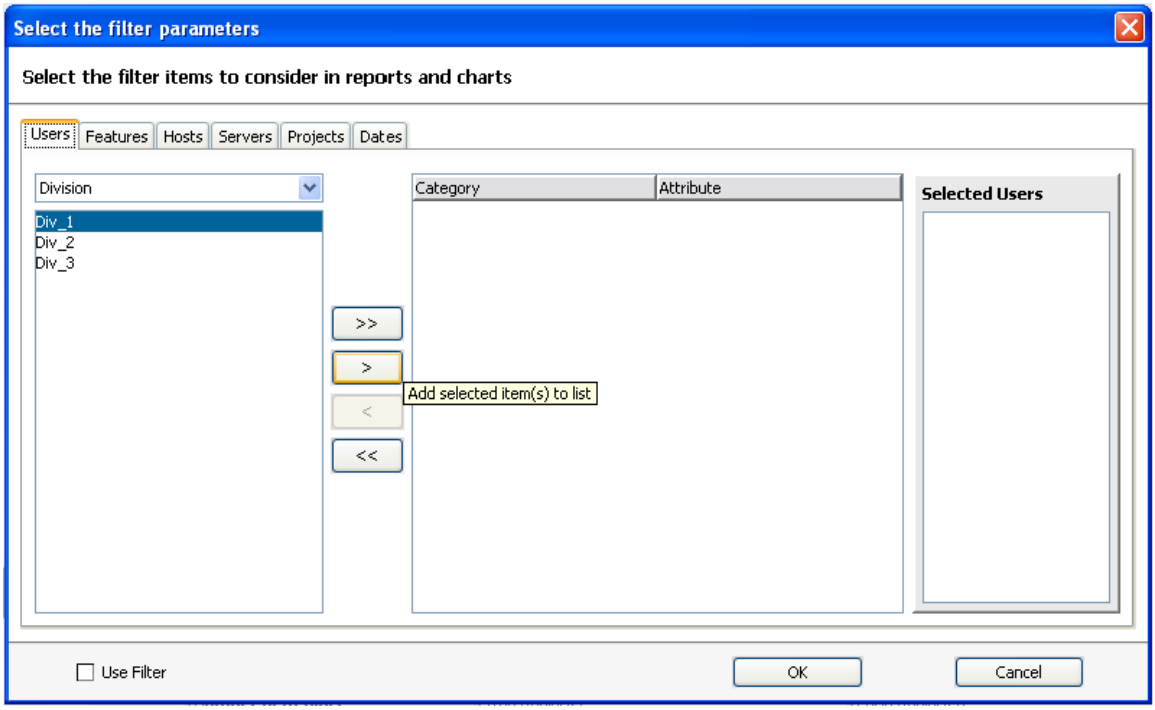
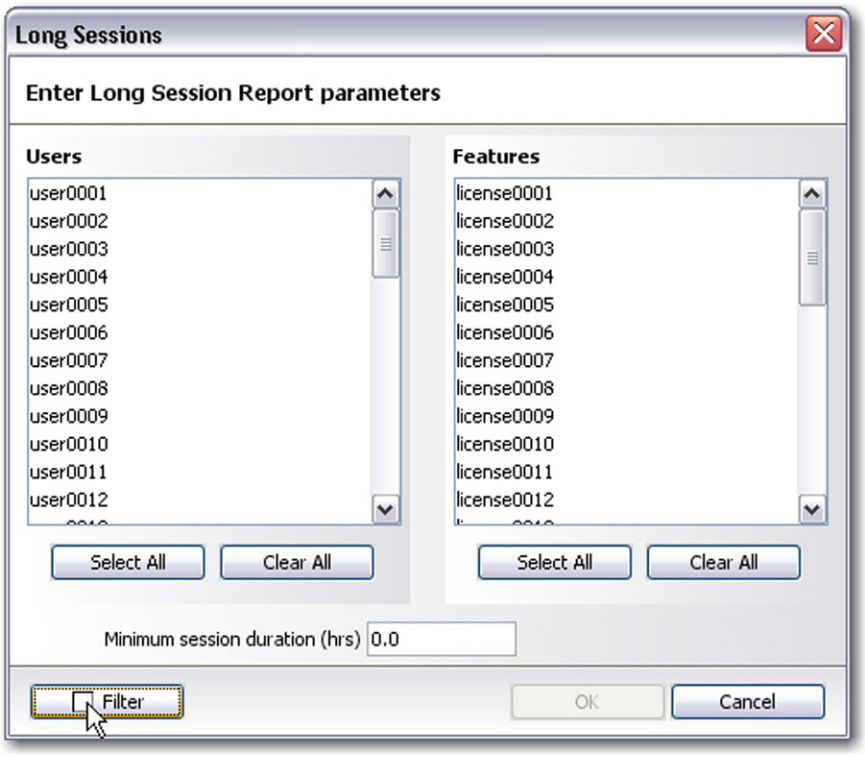


Figure 10: Refining Data in a Report Dialog



How to set the Date Range for Reports or Charts

A few report dialogs allow you to specify a date range in the text fields labelled **Start Date** and **End Date** directly in the report dialog. They are the:

- **"Concurrent Use Report"** on page 55
- **"Summary Invoice Report"** on page 75
- **"Detailed Invoice Report"** on page 77

Most other reports allow you to set the date range by selecting **Filter > Set Filter...** and editing the **Select the Filter Parameters** dialog.

When you first open one of these report dialogs, there is a time interval already specified in these fields that originates from one of the following sources.

- The date range specified in the Select the Filter Parameters dialog, accessed under **Filter > Set Filter...**, that was activated with a check mark beside **Use Filter**.
- If **Use Filter** was not activated with a check mark, the time interval is taken from the data range defined in your content scope.

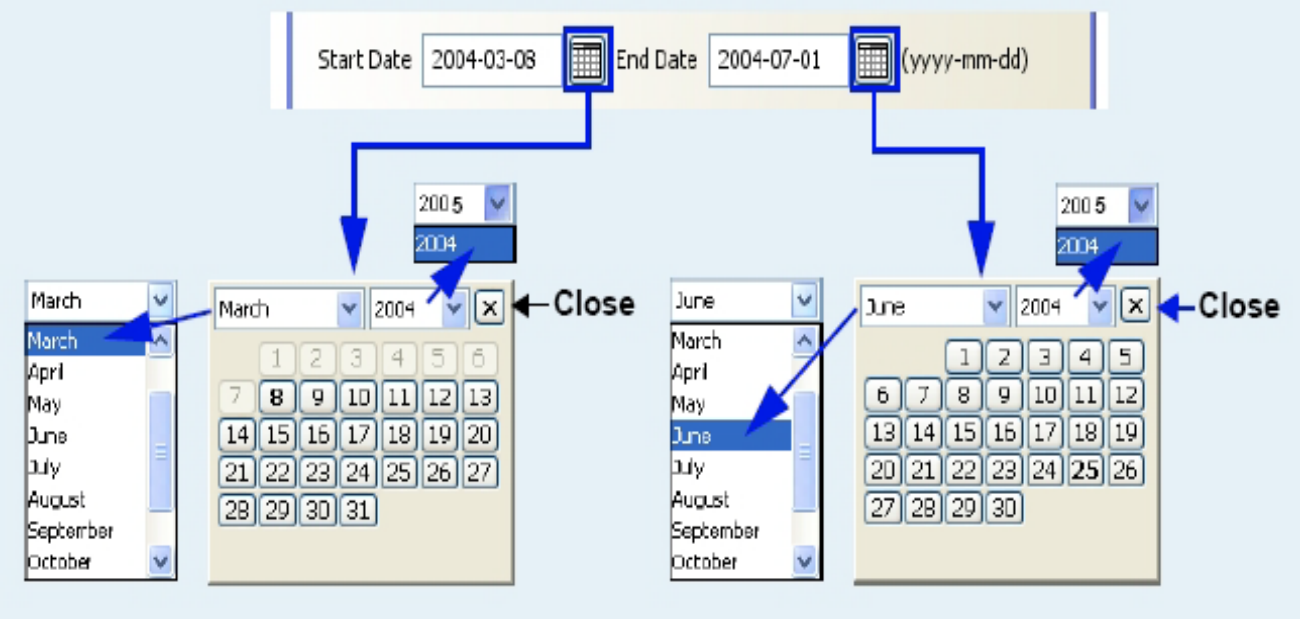
To further limit the time interval displayed in your report, fill in the fields for **Start Date** and **End Date**, using one of the following actions.

TASK

1. Double-click on the text field values and type in new ones using the format `YYYY-MM-DD` (year-month-day), or
2. Open the calendar by clicking the square button beside the text field. Select the year and month from small pull-down menus and then click on the actual calendar day. Close the calendar by clicking the square button, in the upper right corner. The new date displays automatically in the field.

   ADDITIONAL INFORMATION: If the calendar is shadowed and is not accessible, then you have selected a date when no data exists in your *LT Analyzer* database. At this point, you must choose another date when data exists, or import more data to cover the time you need for the report.

Figure 11: Setting a Report Time Span



Database Summary Reports

The *LT Analyzer* reports that display a summary of database information include:

Database Information

Describes the data for your current content scope.

Data Sources

Describes the data used to create your *LT Analyzer* database.

Users

The users listed in your *LT Analyzer* database.

Feature Model

The feature model for your *LT Analyzer* database.

License Model

The licenses model for your *LT Analyzer* database.

Feature Use Summary

A summary of usage of the licenses listed in your *LT Analyzer* database.

Groups

Displays the total license usage by a group.

Budget

Displays the monthly fees that define your annual-license budget.

For all of these reports, you simply click on the menu item and *LT Analyzer* immediately displays the resulting data in table format.

Database Information Report

What is the Database Information Report?

The **Database Information** report contains three tables that describe what database you are connected to, what content scope you have selected (and its characteristics), and some statistics about the data in database conforming to your content scope.

How to Generate a Database Information Report

TASK

1. To create this report, click on **Reports > Database Information**.

RESULT:

A table appears with information under the following headings:

Database Information

Location

Display details of the current database including type, ID logged in, and either full path to file (for File databases) or database name, server and port (for Server databases).

Scope

Name

The name of the current content scope.

License Model

The name of the license model associated with this content scope.

Budget Model

The name of the budget model associated with this content scope.

Features

A list of vendor names used to restrict features in this content scope.

Users

A list of user attributes used to restrict users in this content scope.

Session Statistics

Date Range

The start date of the first session and the end date of the last session.

Duration Range (hours)

The minimum and maximum session lengths in hours.

Number of Sessions

The total number of distinct sessions.

Number of Licenses

Total number of distinct licenses.

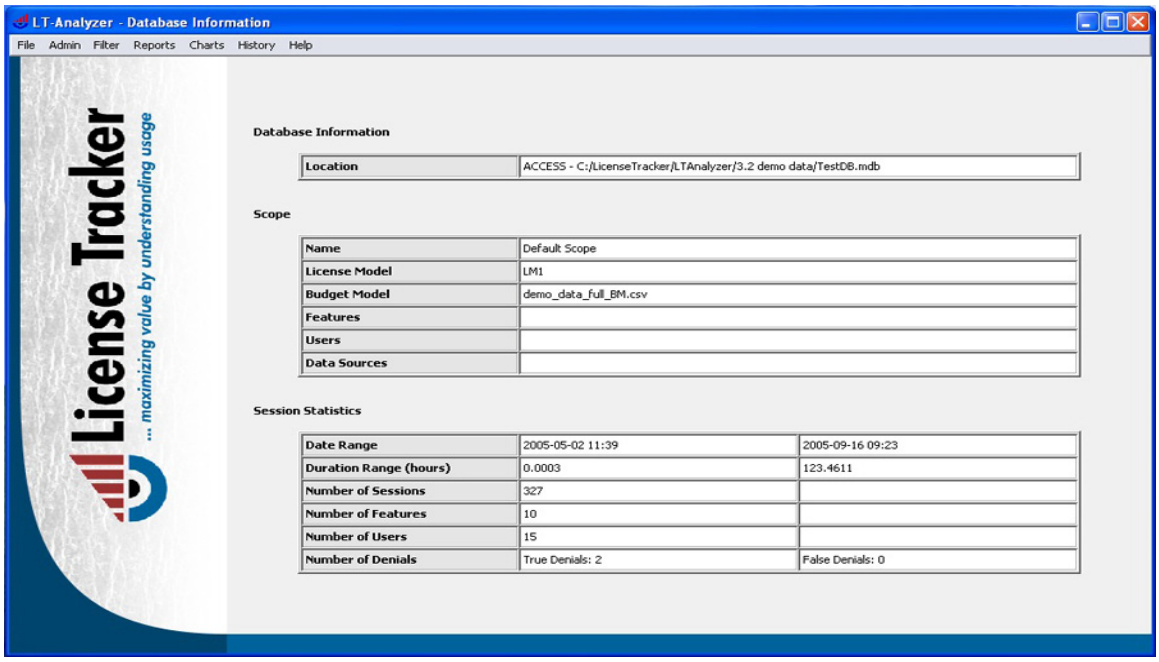
Number of Users

The total number of distinct users.

Number of Denials

The total number of true and false license denials.

Figure 12: Database Information Report



Data Sources Report

What is the Data Sources Report?

The **Data Sources** report is a table that describes:

- the table ID of the data imported,
- the names of the datafiles imported,
- the server,
- vendors appearing in the data,
- original format of the data,
- the date the data was imported,
- the start and end date of the sessions recorded in the data,
- the number of sessions read from the data file, and
- the number of sessions actually loaded in the database.

How to Generate the Data Sources Report

TASK

1. To create this **report**, click on **Reports** > **Data Sources**.

RESULT:

A table appears with information under the following headings:

- ID
- Data File
- Last Name
- E-mail Address
- Server
- Vendor
- Format
- Import Date
- Start Date
- End Date
- Sessions Read
- Sessions Loaded.

Users Report

What is the Users Report?

The **Users Report** is a table that describes the users listed in your *LT Analyzer* database.

How to Generate the Users Report

TASK

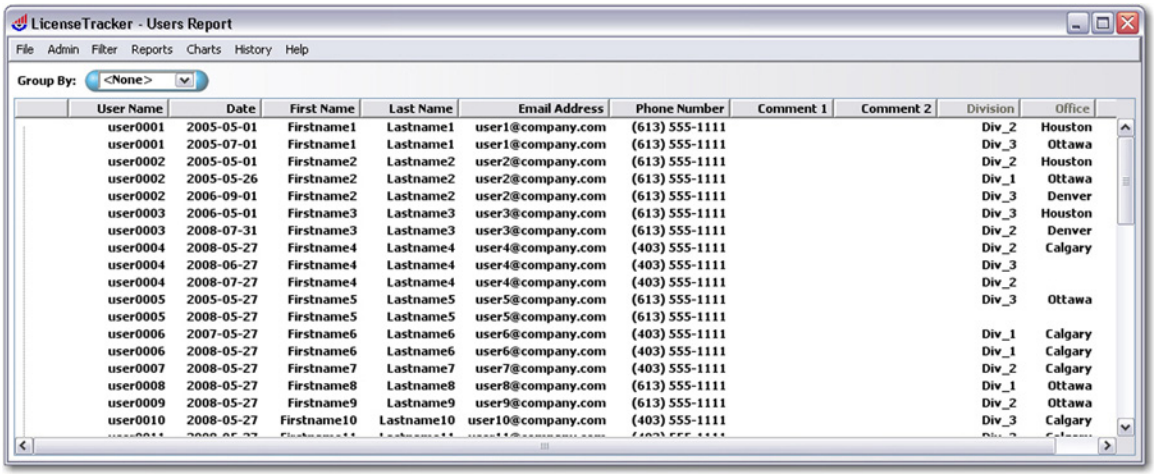
1. To create this report, click on **Reports** > **Users**.

RESULT:

A table appears displaying the content of the **User Model** (see "User Model" on page 21 for details) for the users conforming to your selected content scope.

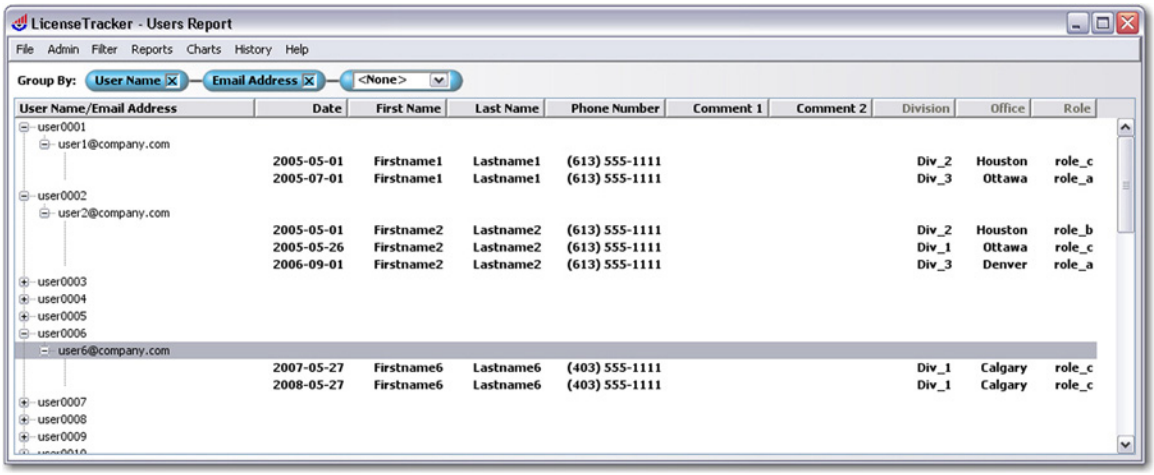
*NOTE: The initial view of the report may be expanded by selecting parameters in the **Group By** widget and clicking on the **+ sign** in front of the selected group parameters.*

Figure 13: Users Report: Initial view



User Name	Date	First Name	Last Name	Email Address	Phone Number	Comment 1	Comment 2	Division	Office
user0001	2005-05-01	Firstname1	Lastname1	user1@company.com	(613) 555-1111			Div_2	Houston
user0001	2005-07-01	Firstname1	Lastname1	user1@company.com	(613) 555-1111			Div_3	Ottawa
user0002	2005-05-01	Firstname2	Lastname2	user2@company.com	(613) 555-1111			Div_2	Houston
user0002	2005-05-26	Firstname2	Lastname2	user2@company.com	(613) 555-1111			Div_1	Ottawa
user0002	2006-09-01	Firstname2	Lastname2	user2@company.com	(613) 555-1111			Div_3	Denver
user0003	2006-05-01	Firstname3	Lastname3	user3@company.com	(613) 555-1111			Div_3	Houston
user0003	2008-07-31	Firstname3	Lastname3	user3@company.com	(613) 555-1111			Div_2	Denver
user0004	2008-05-27	Firstname4	Lastname4	user4@company.com	(403) 555-1111			Div_2	Calgary
user0004	2008-06-27	Firstname4	Lastname4	user4@company.com	(403) 555-1111			Div_3	
user0004	2008-07-27	Firstname4	Lastname4	user4@company.com	(403) 555-1111			Div_2	
user0005	2005-05-27	Firstname5	Lastname5	user5@company.com	(613) 555-1111			Div_3	Ottawa
user0005	2008-05-27	Firstname5	Lastname5	user5@company.com	(613) 555-1111				
user0006	2007-05-27	Firstname6	Lastname6	user6@company.com	(403) 555-1111			Div_1	Calgary
user0006	2008-05-27	Firstname6	Lastname6	user6@company.com	(403) 555-1111			Div_1	Calgary
user0007	2008-05-27	Firstname7	Lastname7	user7@company.com	(403) 555-1111			Div_2	Calgary
user0008	2008-05-27	Firstname8	Lastname8	user8@company.com	(613) 555-1111			Div_1	Ottawa
user0009	2008-05-27	Firstname9	Lastname9	user9@company.com	(613) 555-1111			Div_2	Ottawa
user0010	2008-05-27	Firstname10	Lastname10	user10@company.com	(403) 555-1111			Div_3	Calgary

Figure 14: Users Report: Expanded view



User Name/Email Address	Date	First Name	Last Name	Phone Number	Comment 1	Comment 2	Division	Office	Role
user0001									
user1@company.com									
	2005-05-01	Firstname1	Lastname1	(613) 555-1111			Div_2	Houston	role_c
	2005-07-01	Firstname1	Lastname1	(613) 555-1111			Div_3	Ottawa	role_a
user0002									
user2@company.com									
	2005-05-01	Firstname2	Lastname2	(613) 555-1111			Div_2	Houston	role_b
	2005-05-26	Firstname2	Lastname2	(613) 555-1111			Div_1	Ottawa	role_c
	2006-09-01	Firstname2	Lastname2	(613) 555-1111			Div_3	Denver	role_a
user0003									
user0004									
user0005									
user0006									
user6@company.com									
	2007-05-27	Firstname6	Lastname6	(403) 555-1111			Div_1	Calgary	role_c
	2008-05-27	Firstname6	Lastname6	(403) 555-1111			Div_1	Calgary	role_c
user0007									
user0008									
user0009									

Feature Model Report

What is the Feature Model Report?

The **Feature Report** is a table that describes the features listed in your *LT Analyzer* database.

How to Generate the Feature Model Report

TASK

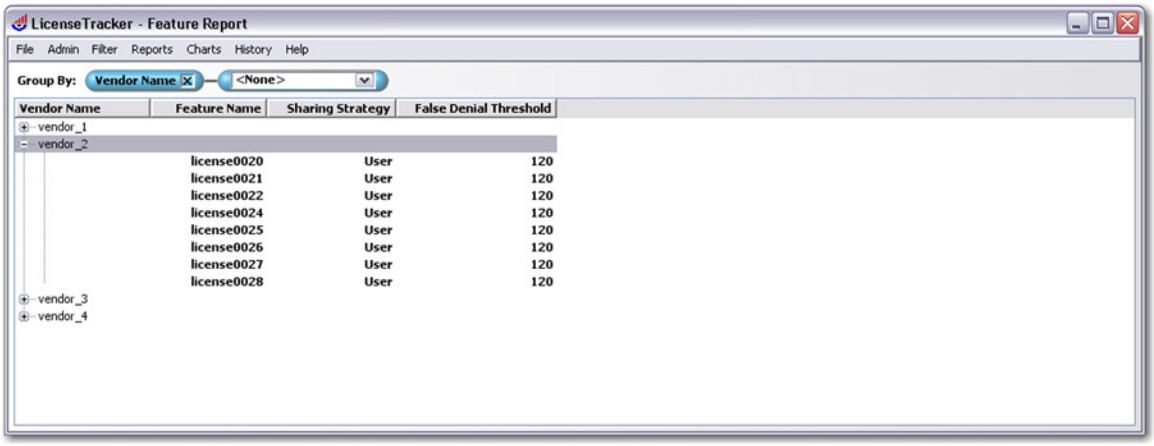
1. To create this report, click on **Reports** > **Feature Model**.

RESULT:

A table appears displaying the content of the **Feature Model** (see **"Feature Model"** on page 22 for details) for the features conforming to your selected content scope.

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

Figure 15: Feature Model Report



License Model Report

What is the License Model Report?

The **License Model Report** is a table that displays the number and costs of licenses for the license model associated with the current content scope.

How to Generate the License Model Report

TASK

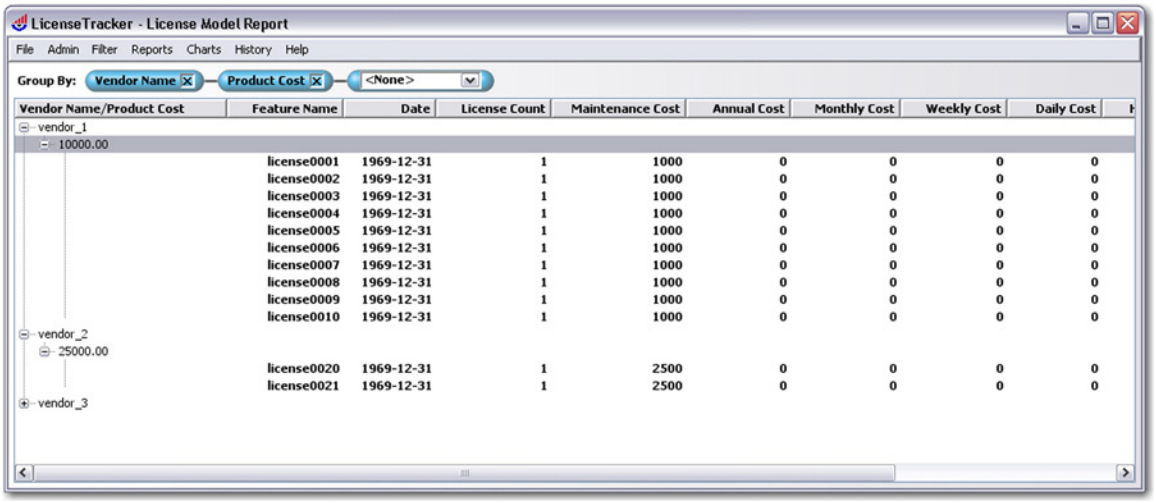
1. To create this report, click on **Reports** > **License Model**.

RESULT:

A table appears displaying the content of the **License Model** (see "License Models" on page 25 for details) associated with your selected content scope.

*NOTE: The initial view of the report may be expanded by selecting parameters in the **Group By** widget and clicking on the **+ sign** in front of the selected group parameters.*

Figure 16: License Model Report


LicenseTracker - License Model Report
File Admin Filter Reports Charts History Help
Group By: Vendor Name Product Cost <None>
Vendor Name/Product Cost
Feature Name
Date
License Count
Maintenance Cost
Annual Cost
Monthly Cost
Weekly Cost
Daily Cost
vendor_1
10000.00
license0001 1969-12-31 1 1000 0 0 0 0
license0002 1969-12-31 1 1000 0 0 0 0
license0003 1969-12-31 1 1000 0 0 0 0
license0004 1969-12-31 1 1000 0 0 0 0
license0005 1969-12-31 1 1000 0 0 0 0
license0006 1969-12-31 1 1000 0 0 0 0
license0007 1969-12-31 1 1000 0 0 0 0
license0008 1969-12-31 1 1000 0 0 0 0
license0009 1969-12-31 1 1000 0 0 0 0
license0010 1969-12-31 1 1000 0 0 0 0
vendor_2
25000.00
license0020 1969-12-31 1 2500 0 0 0 0
license0021 1969-12-31 1 2500 0 0 0 0
vendor_3

Feature Use Summary Report

What is the Feature Use Summary Report?

The **Feature Use Summary** report is a table that shows usage statistics for the features conforming to your content scope.

How to Generate the Feature Use Summary Report

TASK

1. To create this report, click on **Reports > Feature Use Summary**.Click **Filter** to open the **Select the Filter Parameters** dialog, review your values or set new ones and activate the Use Filter button with a check mark.

   ADDITIONAL INFORMATION: The **Filter** button should have a check mark in it when you want to use the parameters from the **Select the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to "How to Change Filter Parameters for Reports and Charts" on page 40.

2. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42.
3. Select one or more license names from the list.

   ADDITIONAL INFORMATION: *LT Analyzer* informs you when you select a license that was not used during the specified time range.
4. Click **OK** to produce the **Feature Use Summary** report.

RESULT:

A table appears with information under the following headings:

Vendor

The name of the Vendor associated with the feature.

Feature Name

Lists individual feature names as they appear in the log files.

Count

Lists the number of purchased licenses.

Peak Use

Maximum number of licenses concurrently in use for this feature, over the time span specified in your **Select the parameters for a filter** dialog.

Effective Peak

Shows the maximum number of licenses concurrently in use when rounding down peak values as specified by the effective peak threshold parameter in the user preferences.

Users

The number of distinct users of this feature.

Users/Peak Use

The average number of users per license.

Denials

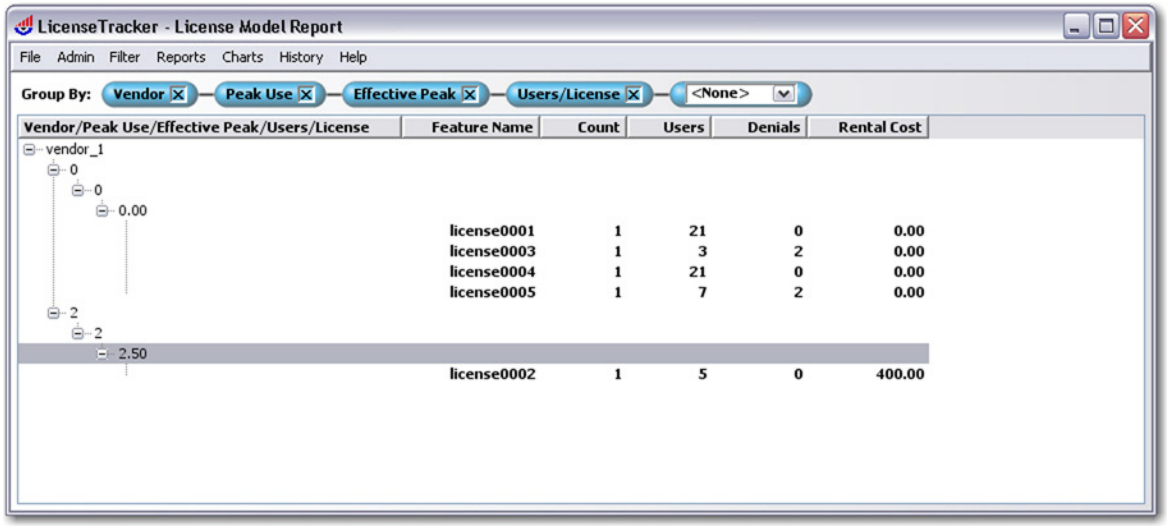
The number of denials for each feature.

Rental Cost

The total cost of all rentals for each feature.

*NOTE: The initial view of the report may be expanded by selecting parameters in the **Group By** widget and clicking on the + **sign** in front of the selected group parameters.*

Figure 17: Feature Use Summary Report



Groups Report

What is the Groups Report?

The groups report displays a listing of the number of members of each group in the *LT Analyzer* database where a group is defined by a combination of a user category (group types) and attributes (specific group names) within the categories.

How to Generate the Groups Report

TASK

1. To create this report, click on **Reports** > **Groups** to display a table of information under the following headings:

RESULT:

A table appears with information under the following headings:

Category

Lists the various categories used to define user groups. This name could also define a region or a department within a company.

Attribute

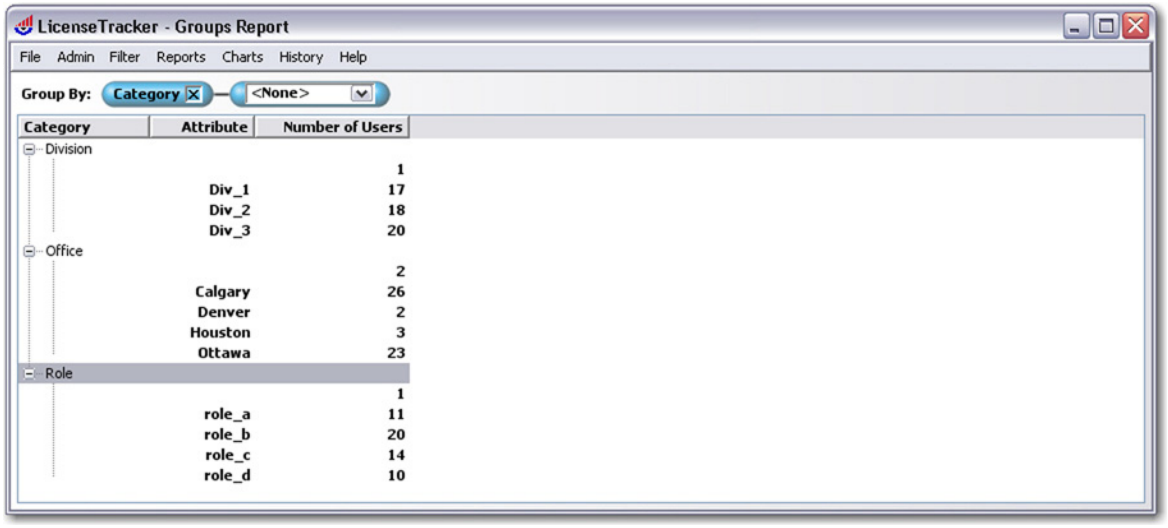
Lists the various group names associated with each category.

Number of Users

Lists the total number of users within a group.

*NOTE: The initial view of the report may be expanded by selecting parameters in the **Group By** widget and clicking on the + **sign** in front of the selected group parameters.*

Figure 18: Groups Report



Budget Reports

What is the Budget Report?

The budget report is a table that displays the monthly planned rental expenditures as defined in the budget model associated with the current content scope.

How to Generate the Budget Report

TASK

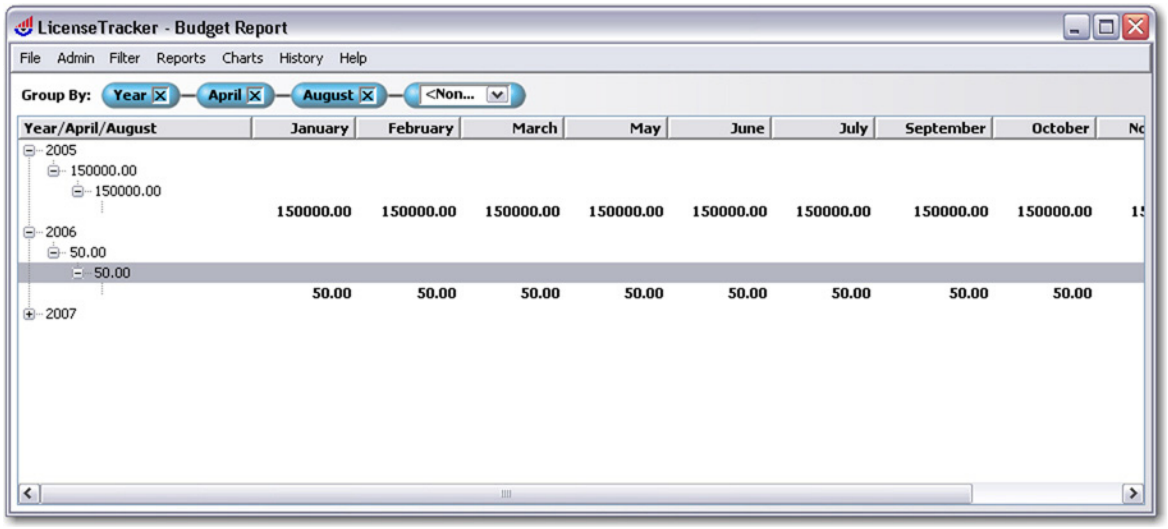
1. To create this report, click on **Reports** > **Budget**.

RESULT:

A table appears displaying the content of the budget model associated with the selected content scope.

*NOTE: The initial view of the report may be expanded by selecting parameters in the **Group By** widget and clicking on the **+ sign** in front of the selected group parameters.*

Figure 19: Budget Report



General Usage Reports

The *LT Analyzer* reports that display general license usage include:

Concurrent Use Report

Identifies which users were on what machines, using a specific license, during a certain time period.

Tabular Report

Displays a spreadsheet defined by X and Y axes where you determine the data headings and also choose the information to display within the table.

Denial Detailed Report

Displays license availability and identifies which users were refused access to a specific license, on what date(s).

Denial Summary Report

Summarizes the number of denials for specific users and for specific licenses in two distinct tables.

Long Session Report

Displays information about the long-term usage of a license, by distinct users.

For the menu items **Denial Detailed** and the **Denial Summary**, you simply click on the menu item and *LT Analyzer* immediately displays the resulting data in table format.

For the menu items **Concurrent Use...**, **Tabular...**, and **Long Sessions...**, *LT Analyzer* requires that you fill in a dialog before producing the report in table format.

Concurrent Use Report

This section describes the concurrent use report and how to generate it.

What is the Concurrent Use Report?

The concurrent use report is a table that identifies which users were on what machines, using a specific feature, during a certain time period.

How to Generate the Concurrent Use Report

To create this *LT Analyzer* report:

TASK

1. Click **Reports > Concurrent Use...** to open a report dialog.
2. Click **Filter** to open the **Select the Filter Parameters** dialog, review your values or set new ones and activate the Use Filter button with a check mark.

   ADDITIONAL INFORMATION: The **Filter** button should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42.

4. Select one feature name from the list.

   ADDITIONAL INFORMATION: LT Analyzer informs you when you select a license that was not used during the specified time range.

5. Click **OK** to produce the **Concurrent Use Report**.

RESULT:

A table appears with information under the following headings:

Date

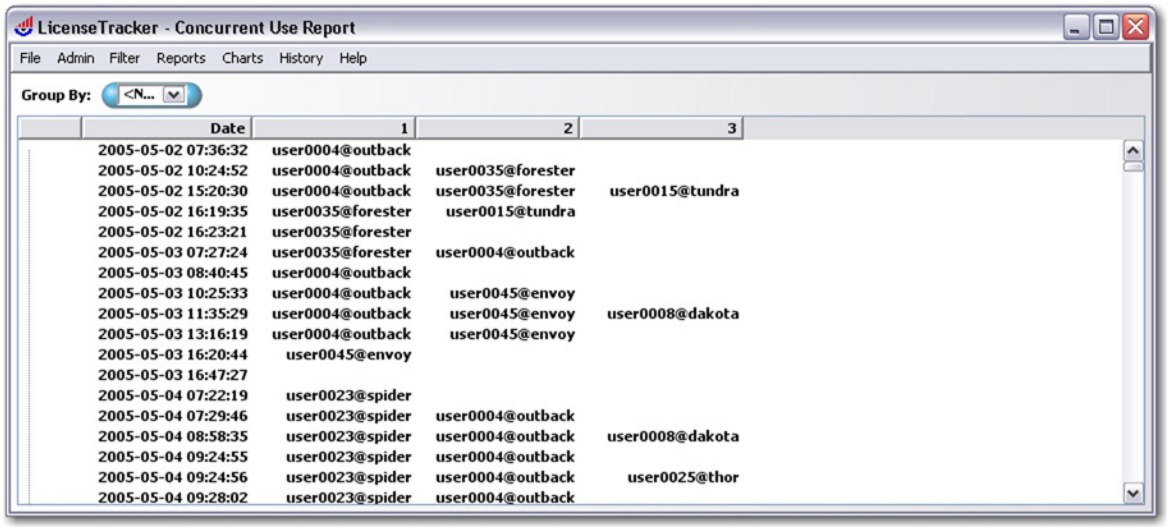
Lists specific dates and times at which the number of concurrent users for the specified feature changed.

Numbered columns

The column numbers indicate the number of users accessing the same feature at the same time. The items identify the username and the host at the time.

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

Figure 20: Concurrent Use Report


LicenseTracker - Concurrent Use Report
File Admin Filter Reports Charts History Help
Group By: <N...
Date 1 2 3
2005-05-02 07:36:32 user0004@outback
2005-05-02 10:24:52 user0004@outback user0035@forester
2005-05-02 15:20:30 user0004@outback user0035@forester user0015@tundra
2005-05-02 16:19:35 user0035@forester user0015@tundra
2005-05-02 16:23:21 user0035@forester
2005-05-03 07:27:24 user0035@forester user0004@outback
2005-05-03 08:40:45 user0004@outback
2005-05-03 10:25:33 user0004@outback user0045@envoy
2005-05-03 11:35:29 user0004@outback user0045@envoy user0008@dakota
2005-05-03 13:16:19 user0004@outback user0045@envoy
2005-05-03 16:20:44 user0045@envoy
2005-05-03 16:47:27
2005-05-04 07:22:19 user0023@spider
2005-05-04 07:29:46 user0023@spider user0004@outback
2005-05-04 08:58:35 user0023@spider user0004@outback user0008@dakota
2005-05-04 09:24:55 user0023@spider user0004@outback
2005-05-04 09:24:56 user0023@spider user0004@outback user0025@thor
2005-05-04 09:28:02 user0023@spider user0004@outback

Tabular Report

This section describes the tabular report and how to generate it.

What is the Tabular Report?

The tabular report displays a spreadsheet defined by X and Y axes where you determine the data headings and also choose the information to display within the table.

How to Generate the Tabular Report

To create this report:

TASK

1. Click **Reports** > **Tabular...** to open the **Tabular Report** dialog.
2. Click **Filter** to open the **Select the Filter Parameters** dialog, review your values or set new ones and activate the Use Filter button with a check mark.

   ADDITIONAL INFORMATION: The **Filter** button should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Click **OK** to return to the **Tabular Report** dialog.
4. Specify the **Horizontal Axis**.

   ADDITIONAL INFORMATION: In the report, this field appears as column headings across the top of the report. To identify a heading, click the button beside the text field to display a pull-down menu and select one option. Typically, a time value is selected for the horizontal axis (days, months, or years).
5. Specify the **Vertical Axis**.

   ADDITIONAL INFORMATION: In the report, this field appears as row headings down the left side of the report. To identify a heading, click the button beside the text field to display a pull-down menu and select one option. Typically, a database feature is selected for the vertical axis (i.e., feature, user, or group).NOTE: If you selected "Group" for one of the axis, a second drop down menu will appear providing a list of the user categories to select from.

6. Specify the **Data for Report**. In the report, this field identifies the statistics displayed within the report. To identify your data, click the button beside the text field to display a pull-down menu and select one of the following options:
   - **Total Use (hr.)**- the total hours spent using a license for the specified feature or features (actual figures, not rounded up values).
   - **Overage (hr.)**- the number of hours that a licenses were signed-out from the rental pool (not purchased licenses).
   - **Peak Concurrent Usage**- the maximum number of distinct users that signed-out a license at a time.
   - **Concurrent Overage**- the maximum number of signed-out licenses that exceeded your purchased limit.
   - **Cost**- the rental costs charged to you for non-owned license use.
   - **Unique User Count**- the number of unique userIDs that signed-out a license for the specified feature or features over the specified period.
   - **Session Count**- the number of sessions.
7. Click **OK** to generate the report.

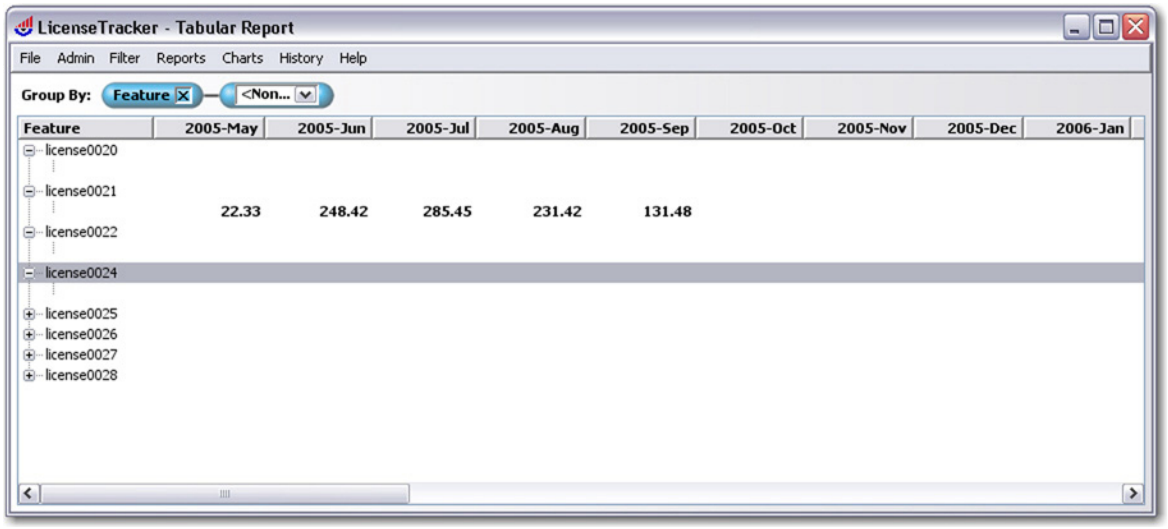
RESULT:

A computation window opens and shows the progress of the calculation of the selected statistics.

When the computation is complete the calculation window closes and the **Tabular Report** is displayed.

NOTE: *The initial view of the report may be expanded by selecting parameters in the **Group By** widget and clicking on the **+ sign** in front of the selected group parameters.*

Figure 21: Tabular Report



Denial Detailed Report

This section describes a denial detailed report and how to generate it.

What is the Denial Detailed Report?

The denial detailed report is a table that displays which users were denied access to a license for the specified feature or features, when they were denied, and which host they were using at the time.

How to Generate the Denial Detailed Report

TASK

1. To create this *LT Analyzer* report, click on **Reports > Denial Detailed... to open the Denial Detailed Report dialog.** Click Filter to open the Select the Filter Parameters dialog, review your values or set new ones and activate the Use Filter button with a check mark.

   ADDITIONAL INFORMATION: The **Filter** button should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.

2. Click **OK** to return to the **Denial Detailed Report** parameters dialog.

3. Select the date range of the report.

   ADDITIONAL INFORMATION: For more information about setting a date range, go to **"How to set the Date Range for Reports or Charts"** on page 42.

4. Select the license(s) you want to include in the report.
5. Click **OK** to generate the **Denial Detailed Report**.

RESULT:

A table appears with information under the following headings:

User Name

The computer login name (userID) of the user who was denied access to a license.

Feature Name

Name of the feature that could not be accessed by a user.

Host

The name of the user's computer.

Date

The date and time a user was denied access to a license.

True Denial

Whether or not the denial was a true denial or for some other reason.

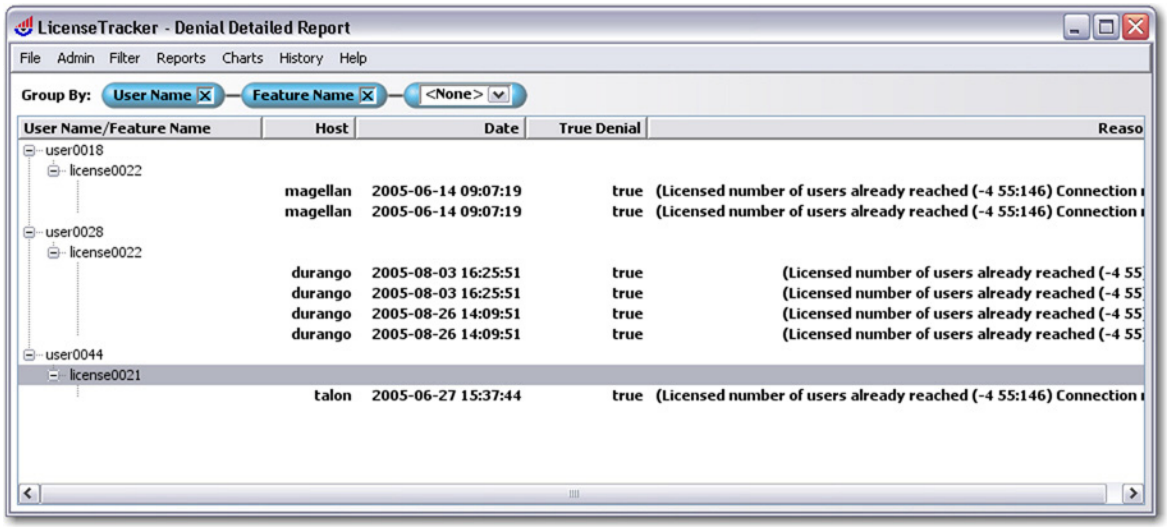
Reason

Displays the reason why access to a license was denied to a user. For example, the license-accessed limits were reached, the server was down, or the user did not have permission that particular license.

NOTE: *These explanations come from the log files. They are not generated by LT Analyzer. They may be clear or hard to understand, depending on the license software generating the logs.*

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

Figure 22: Denial Detailed Report


LicenseTracker - Denial Detailed Report
File Admin Filter Reports Charts History Help
Group By: User Name Feature Name <None>
User Name/Feature Name Host Date True Denial Reaso
user0018
license0022
magellan 2005-06-14 09:07:19 true (Licensed number of users already reached (-4 55:146) Connection
magellan 2005-06-14 09:07:19 true (Licensed number of users already reached (-4 55:146) Connection
user0028
license0022
durango 2005-08-03 16:25:51 true (Licensed number of users already reached (-4 55
durango 2005-08-03 16:25:51 true (Licensed number of users already reached (-4 55
durango 2005-08-26 14:09:51 true (Licensed number of users already reached (-4 55
durango 2005-08-26 14:09:51 true (Licensed number of users already reached (-4 55
user0044
license0021
talon 2005-06-27 15:37:44 true (Licensed number of users already reached (-4 55:146) Connection

Denial Summary Report

This section describes the denial summary report and how to generate it.

What is the Denial Summary Report?

The denial summary report summarizes the number of denials for specific users and for specific features in two distinct tables within the same window.

*NOTE: This report is limited to the filters you applied in the Set the Filter Parameter dialog. To review those parameters, click on **Filter** > **Set Filter** to open the filter dialog and review your parameters. Filters are activated when the **Use Filter** button has a check mark in it.*

How to Generate the Denial Summary Report

TASK

1. To create these two reports, click **Reports** > **Denial Summary Report...** to open the Denial Summary Report Parameters dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones and activate the Use Filter button with a check mark. The **Filter** button should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For

more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.

3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42.

4. Select one or more license names from the list.

   ADDITIONAL INFORMATION: LT Analyzer informs you when you select a license that was not used during the specified time range.

5. Click **OK** to produce the **Denial Summary Report**.

RESULT:

A table appears with two sets of information:

First set of three columns

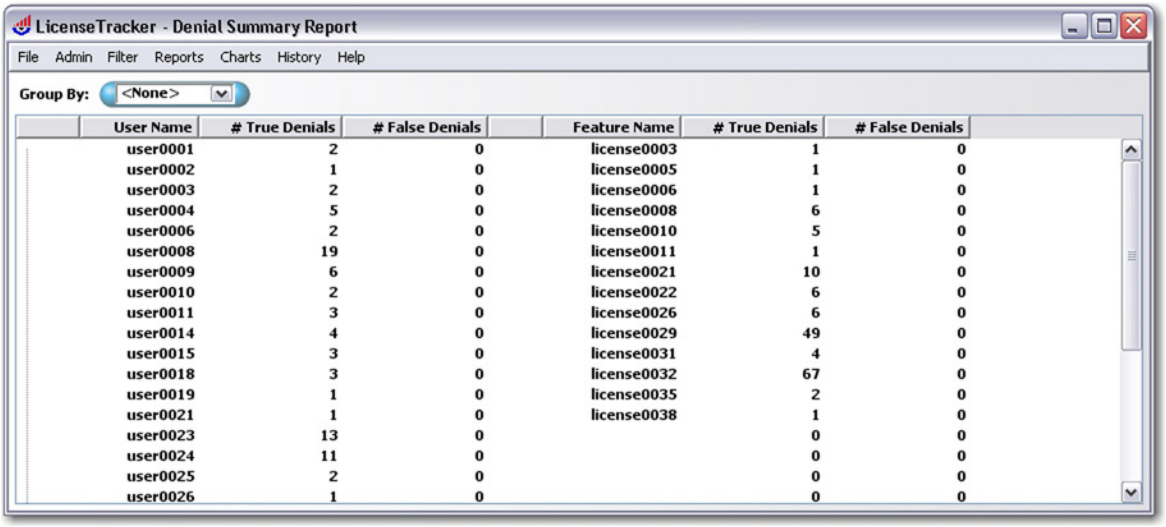
Displays a list of usernames and identifies the number of times that each user was denied access to a license, as numbers of true denials and false denials.

Second set of three columns

Displays a list of feature names and identifies the number of times that access was denied to each feature, as numbers of true denials and false denials.

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

Figure 23: Denial Summary Report



User Name	# True Denials	# False Denials	Feature Name	# True Denials	# False Denials
user0001	2	0	license0003	1	0
user0002	1	0	license0005	1	0
user0003	2	0	license0006	1	0
user0004	5	0	license0008	6	0
user0006	2	0	license0010	5	0
user0008	19	0	license0011	1	0
user0009	6	0	license0021	10	0
user0010	2	0	license0022	6	0
user0011	3	0	license0026	6	0
user0014	4	0	license0029	49	0
user0015	3	0	license0031	4	0
user0018	3	0	license0032	67	0
user0019	1	0	license0035	2	0
user0021	1	0	license0038	1	0
user0023	13	0		0	0
user0024	11	0		0	0
user0025	2	0		0	0
user0026	1	0		0	0

Long Session Report

This section describes the **Long Session Report** and how to generate it.

What is the Long Session Report?

The Long Session Report is a table that displays information about which users had a license for specific features in use for longer than a specified time limit.

Normal cycles of use for a license

This refers to the productivity cycle of a license. For example, you may think that a license requires only a few hours for proper use, and may find that most users require more time than you originally estimated for that specific license. This affects how you purchase licenses and allocate hours to a project/user.

Power users of a license

This refers to those people who use a software product for long periods of time because they are the experts users or because of work load or other project requirements. These people work more continuous hours than the average user without being abusive to the license.

Users that abuse a license

This refers to users that monopolize a license for long periods of time, to ensure the availability of that license for their specific needs, and in so doing, prevent other users from gaining access to a specific feature. For example, a user that accesses the software and stays logged in for days or weeks, would fall into this category.

How to Generate the Long Session Report

To create this report:

TASK

1. Click on **Reports** > **Long Sessions...** to open a Long Sessions Report parameter dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones and activate the Use Filter button with a check mark. The **Filter** button should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40. Click OK to close the Set the Filters Parameter dialog and return to the Long Sessions Report dialog.

3. Select **Users and Licenses**. These windows list the computer UserIDs and licenses available in your *LT Analyzer* database. In each window, use your mouse with the **SHIFT** or **CONTROL** keys to select individual items or click **Select All** to highlight the entire window.
4. Enter the **Minimum session duration (hours)**. Double-click in the text field and enter a number that acts as a marker; any session lengths greater than this number are displayed in your report.
5. Click **OK** to immediate produce the **Long Sessions Report**.

RESULT:

The Long Session report contains information under the following headings:

Feature

Lists the selected features, in alphabetical order.

User

Lists the userIDs associated with the long sessions. Items are sorted alphabetically, first by feature name and then by userID.

Start Date

Identifies the start date and time that a specified user accessed a license for the specified feature. These values are first arranged alphabetically by feature and then by user.

End Date

Identifies the end date and time that a specified user returned the license. These values are arranged chronologically, first by feature and then by user.

Duration (Hours)

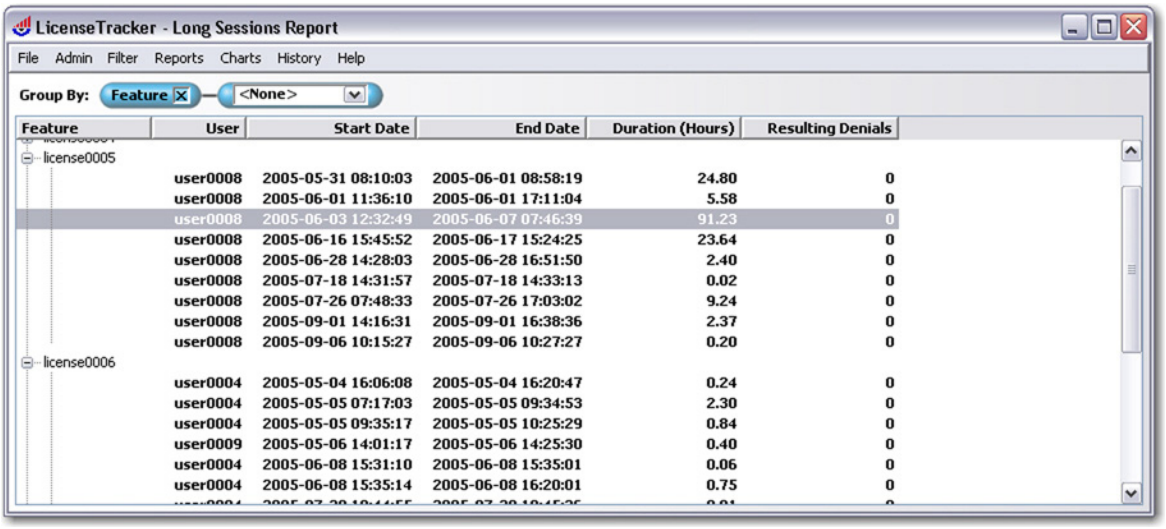
The total hours of consecutive time accumulated on a license, by a user, in a single login session that exceeds the indicated minimum time (Minimum Session Duration). These hours represent the time elapsed between the Start Date and the End Date.

Resulting Denials

The total number of times access to a license for a particular feature was denied to any userID during the session defined by the Start Date and End Date.

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

Figure 24: Long Session Report



Financial Reports

The *LT Analyzer* reports that display financial information about license usage include:

- **"Group Splits Report"** on page 65 - displays the break-down of license usage by a group.
- **"Summary Invoice Report"** on page 75 - summarizes the number of rental license(s) and indicates the total cost per license over a specified time period (pay-per-use data).
- **"Detailed Invoice Report"** on page 77 - displays detailed information about license usage over time.
- **"License Model Efficiency Report"** on page 79 - displays peak license usage and cost consequences.

For the **Group Splits Report** and the **License Model Efficiency Report**, you simply click on the menu item and *LT Analyzer* immediately displays the resulting data in table format.

For the menu items **Summary Invoice Report** and **Detailed Invoice Report**, *LT Analyzer* requires that you fill in a dialog before producing the report in table format.

NOTE: *Financial reports ignore any user specifications in the Set the Filter Parameter dialog, as all users must be considered for accurate calculations.*

Group Splits Report

This section describes the **Group Splits Report** and how to generate it.

What is a Group Splits Report?

The **Group Splits Report** is a table that displays the break-down of software usage between selected groups in a specific user category. The feature and group names are determined by you and selected in the Set Filter Parameters dialog accessed under **Filter > Set Filter...**.

Many of the calculations in the group split reports are based on the concept of the value of a software feature.

The total value or cost of a software license is also computed from the license model. This number, under the "**Value**" heading in the report, is

- the total maintenance cost + rental costs
- over the period of the report.

The value each group has consumed for each license is computed as; **V = Value * (group time) / (total time).**

There are four types of **Group Split Reports**.

Summary Report

The Summary Report provides the percentage breakdown of software usage between the specified groups (each displayed as a unique row in the table) for four different calculation methods (each displayed with a column in the table). The calculation methods are:

- Total Use: the percentage of the total time for all selected features.
- Hours: the percentage of the total time weighted by the value of each feature.
- User Count: the percentage of number of unique users of each feature weighted by the value of the features.
- Peak: the maximum number of concurrent users in the group for each feature weighted by the value of the features.

The numbers in each cell of the table are calculated by considering the value the group has consumed for each feature, where

- For Hours, V=Value* (GroupTime / TotalTime)
- For User Count, V=Value* (GroupUsers / TotalUsers)
- For Peak, V=Value* (GroupPeak / TotalPeak)

The total value each group consumed for all licenses is the sum of the value consumed for each license. (**TGV**).

Adding all the values for all groups and all licenses gives the total value consumed by the organization (**TV**).

The percent of value used by each group is the **TGV / TV * 100**.

Other Reports

The other three Group Splits reports provide the detailed data behind the calculations in the Summary Report. These reports have a common format with columns:

- Product - the name of the feature
- Value - the value for the product, calculated as described above
- Group1...Groupn - a column for each group containing that group's metric for that feature (Hours - time in seconds; UserCount - number of distinct users; Peak - the maximum number of concurrent users of that feature in the group)
- Total - the sum of the Groupx columns

Each cell under the group name headings represents the number of active users in that group for that license.

The numbers under the "**Value**" heading are the same as they are in the Time Splits Report and are calculated in the same way.

How to Generate a Group Splits Report

To create this report:

TASK

1. Click **Reports > Group Splits**.
2. Select one of the options:
   - Summary
   - **Time Splits**
   - **User Splits**
   - **Peak Splits**
   - Select the groups you want to include in the report from the Group Selector dialog, and click OK.
   - Click Filter to open the Set the Filter Parameters dialog, review your values or set new ones and activate the Use Filter button with a check mark. The Filter button should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How**

to Change Filter Parameters for Reports and Charts" on page 40. Click OK to close the Set the Filter Parameters dialog and return to the Group Selector dialog.

- Click OK to produce the report.

RESULT:

A computation window appears on your screen. It displays the progress of the calculations for the report.

When the calculation is complete the computation window disappears and the report is displayed.

The four different types of Group Splits Reports are shown below:

NOTE: *The initial view of a report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

NOTE: *The Peak Concurrent User Count cost splitting method is based on the average of the twenty highest daily peaks during the period. This ensures that a single day aberration does not result in an excessive share of the costs for a single group (or project).*

Figure 25: Group Splits Report (Summary)

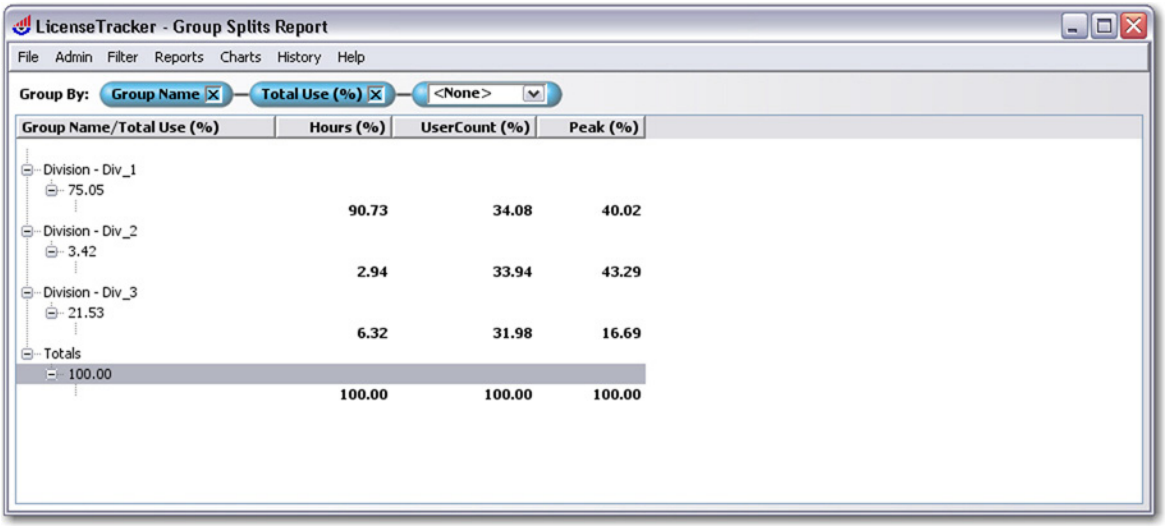

LicenseTracker - Group Splits Report
File Admin Filter Reports Charts History Help
Group By: Group Name Total Use (%) <None>
Group Name/Total Use (%) Hours (%) UserCount (%) Peak (%)
Division - Div_1
75.05 90.73 34.08 40.02
Division - Div_2
3.42 2.94 33.94 43.29
Division - Div_3
21.53 6.32 31.98 16.69
Totals
100.00 100.00 100.00 100.00

Figure 26: Group Splits Report (Time Method)

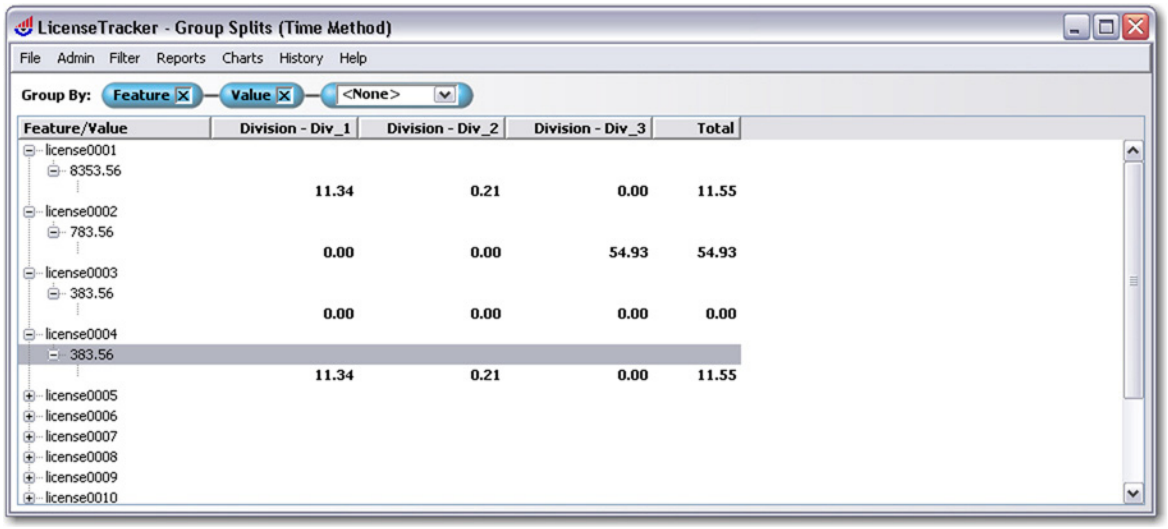


Figure 27: Group Splits Report (User Method)

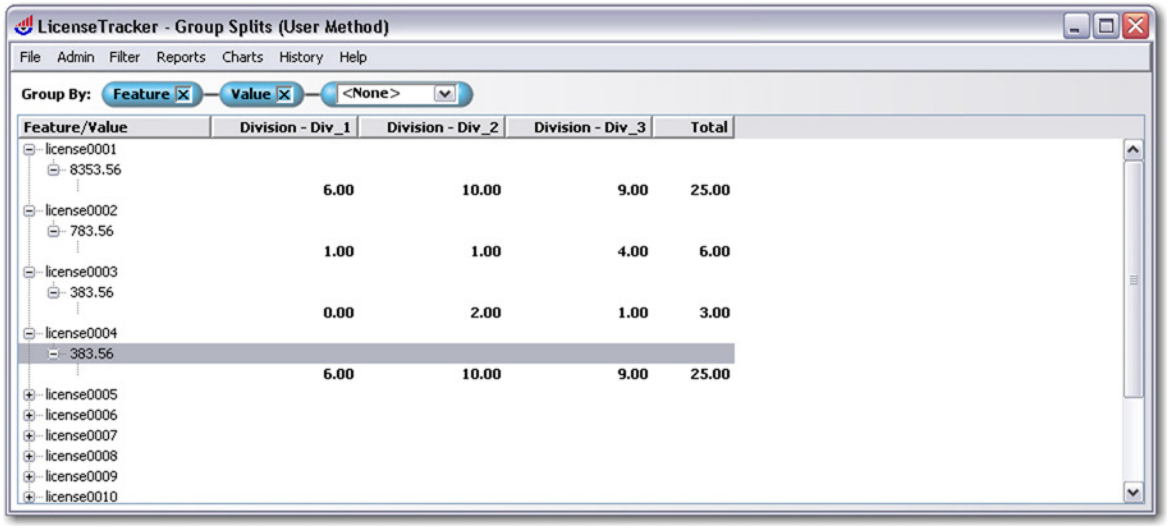
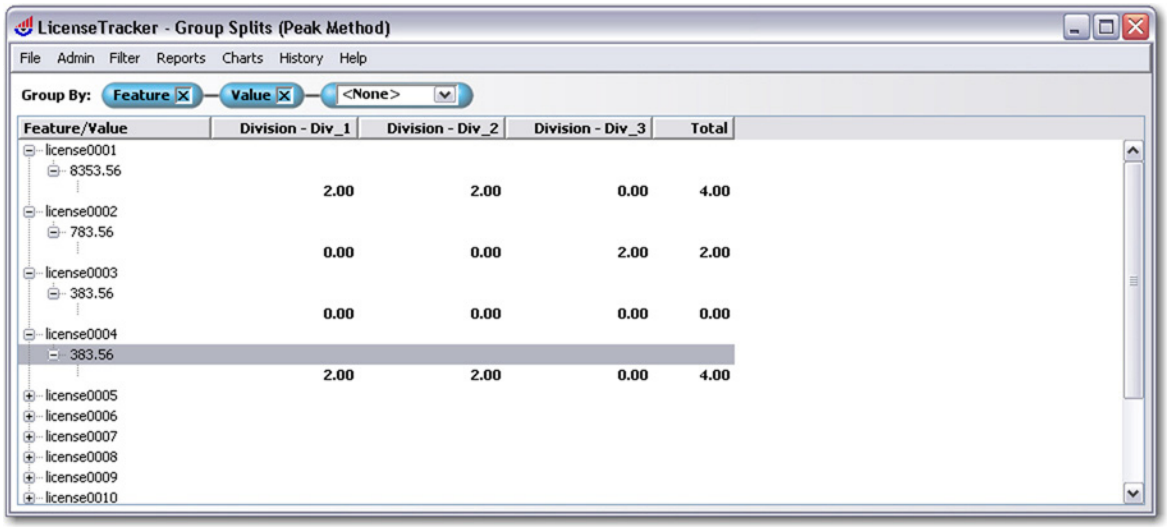


Figure 28: Group Splits Report (Peak Method)



Project Splits Report

This section describes the Project Splits Report and how to generate it.

What is a project splits report?

The Project Splits Report displays information about selected projects in a specific category, including the project name, the features used, number of users etc. The feature and user are determined by your content scope, and these can be refined by using a filter. Selection of project filters is done in the Set Filter Parameters pop up dialog, accessed under Filter > Set Filter …

Many of the calculations in the project splits report are based on the concept of a software feature.

The value each project has consumed for each license is computed as V = Value * (Project Time) / (Total Time).

There are four types of Project Split Report.

Summary Report

The Summary Report provides the percentage breakdown of software usage between the specified projects (each displayed as a unique row in the table) for four different calculation methods (each displayed by a column in the table). The calculation methods are:

Total Use:

the percentage of the total time for all selected features

Hours:

The percentage of the total time weighted by the value of each feature

User Count:

The percentage of numbers of unique users of each feature weighted by the value of the features

Peak:

The maximum number of concurrent users in the project for each feature weighted by the value of the features.

The numbers in each cell of the table are calculated by considering the value the project has consumed for each feature, where:

- For Hours, V = Value * (ProjectTime / TotalTime)
- For User count, V = Value * (ProjectUsers / TotalUsers)
- For Peak, V = Value * (ProjectPeack / TotalPeak)

The total value of each project for all licenses is the sum of the value consumed for each license . This is called the Total Project Value (TPV).

Adding all the values for all projects and all licenses gives the total value consumed by the organization. This is called the Total Value (TV).

The percent of value used by each project is the number: TPV / TV * 100.

Other Reports

The other three Project Splits reports provide the detailed data behind the calculations in the Summary Report. These reports have a common format with columns:

Product:

the name of the feature

Value:

the value for the product, calculated as described above

Project1...Projectn:

a column for each project containing that project's metric for that feature (Hours - time in seconds

UserCount:

number of distinct users;

Peak

the maximum number of concurrent users of that feature in the project)

Total:

the sum of the Project columns

Each cell under the project name headings represents the number of active users in that project for that license.

The numbers under the “Value" heading are the same as they are in the Summary Report and are calculated in the same way. Refer to the Summary Report section for details.

How to Generate a Project Splits Report

To create this report:

TASK

1. Click Reports > Project Splits.
2. Select one of the options:
   - Summary
   - Time Splits
   - User Splits
   - Peak Splits
3. Select the Projects you want to include in the report from the Group Selector dialog, and click OK.
4. Click Filter to open the Set the Filter Parameters dialog, review your values or set new ones and activate the Use Filter button with a check mark. The Filter button should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **“How to Change Filter**

Parameters for Reports and Charts" on page 40. Click OK to close the Set the Filter Parameters dialog and return to the Project Selector dialog.

5. Click OK to produce the report.

RESULT: A computation window appears on your screen. It displays the progress of the calculations for the report. When the calculation is complete the computation window disappears and the report is displayed.

The four different types of Project Splits Reports are shown below:

NOTE: *The initial view of a report may be expanded by selecting parameters in the Project By widget and clicking on the + sign in front of the selected project parameters.*

NOTE: *The Peak Concurrent User Count cost splitting method is based on the average of the twenty highest daily peaks during the period. This ensures that a single day aberration does not result in an excessive share of the costs for a single group (or project).*

Figure 29: Project Splits Report (Summary)

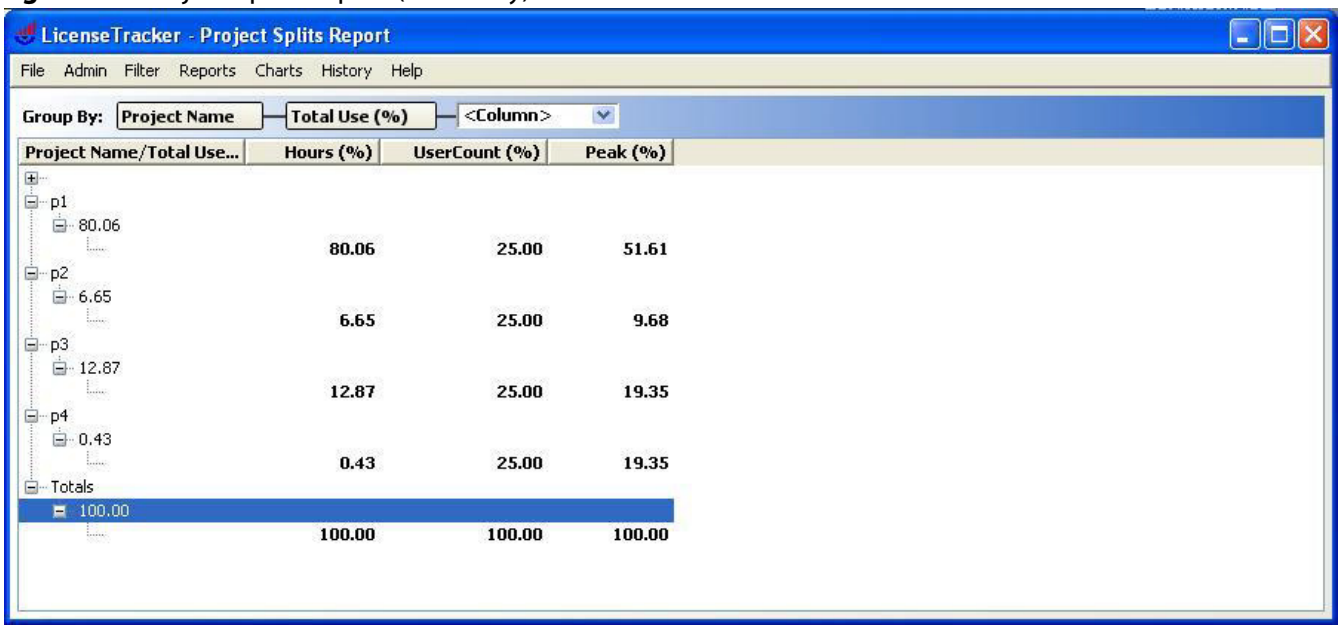


Figure 30: Project Splits Report (Time Method)

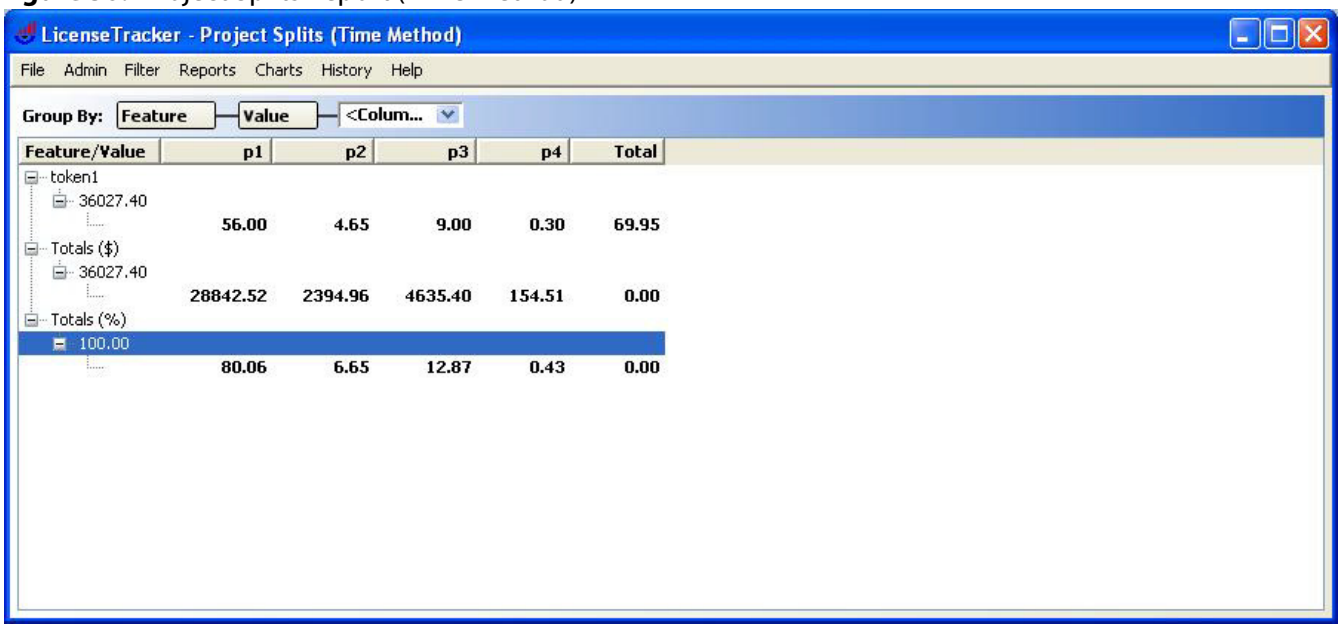


Figure 31: Project Splits Report (User Method)

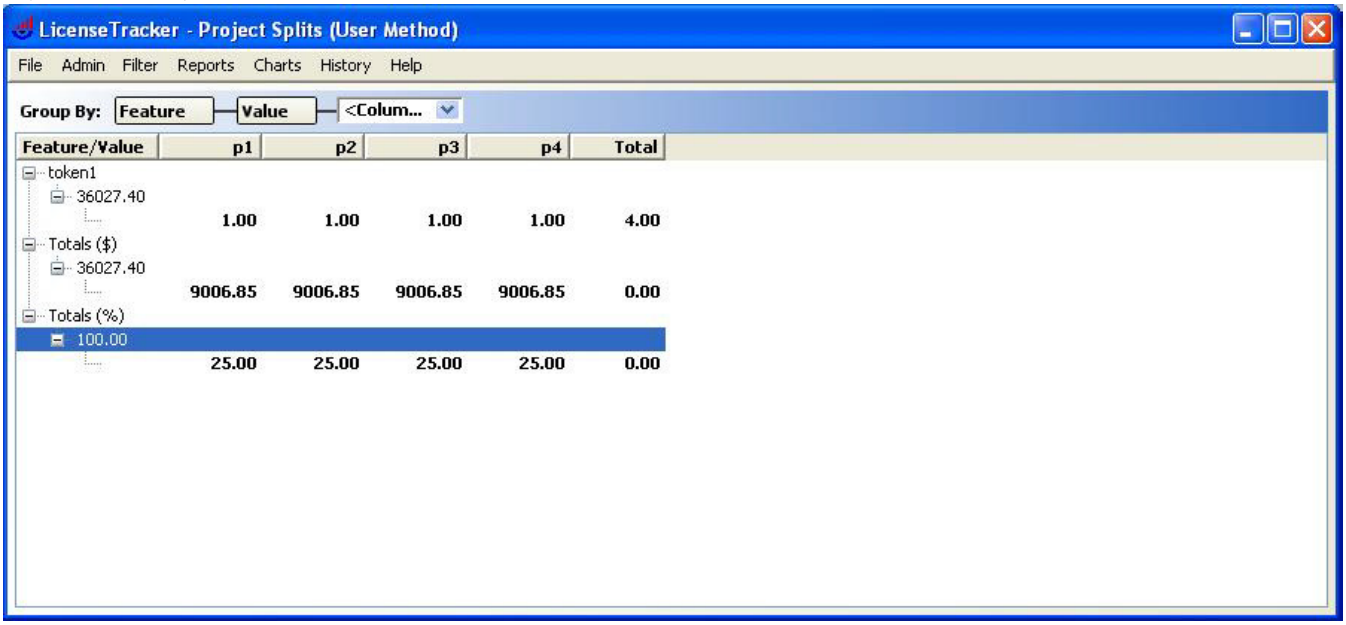
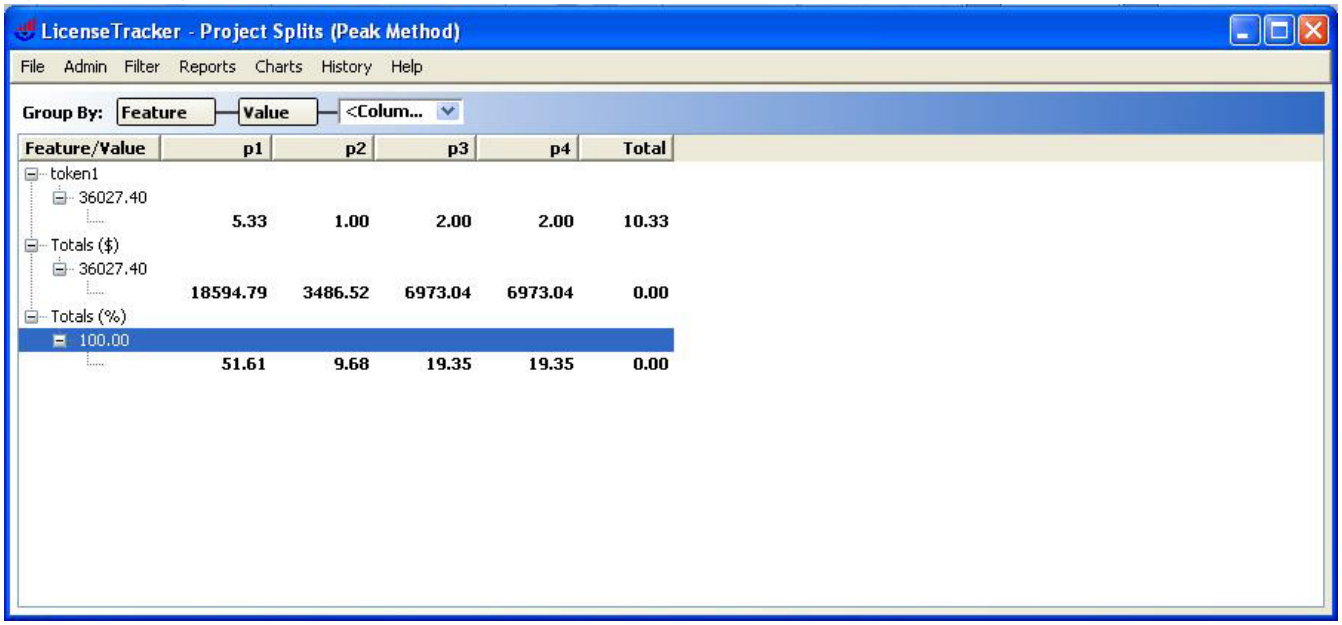


Figure 32: Project Splits Report (Peak Method)



Summary Invoice Report

This section describes the **Summary Invoice Report** and how to generate it.

What is the Summary Invoice Report?

The **Summary Invoice Report** is a table that summarizes the number of rental license(s) (annual, monthly and hourly) and indicates the total cost for each selected feature over a specified time period (pay-per-use data).

How to Generate the Summary Invoice Report

TASK

1. Click **Reports** > **Summary Invoice...** to open a report dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones and activate the **Use Filter** button with a check mark. The **Use Filter** button should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.

3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42.
4. Identify the license name(s) that you want to display, and use to calculate statistics, in the report.

   ADDITIONAL INFORMATION: You can select more than one name in the list. Use the **SHIFT** or **CONTROL** keys to select individual license names or press the **Select All** button to use all license names in your report.
5. Click **OK**.

RESULT:

The **Summary Invoice Report** appears with information under the following headings:

Feature

Lists the selected rental feature name(s).

Annual Rentals

Identifies the number of annual license rentals for this feature in the period.

Monthly Rentals

Identifies the number of monthly license rentals for this feature in the period.

Daily Rentals

Identifies the number of daily license rentals for this feature in the period.

Hourly Rentals

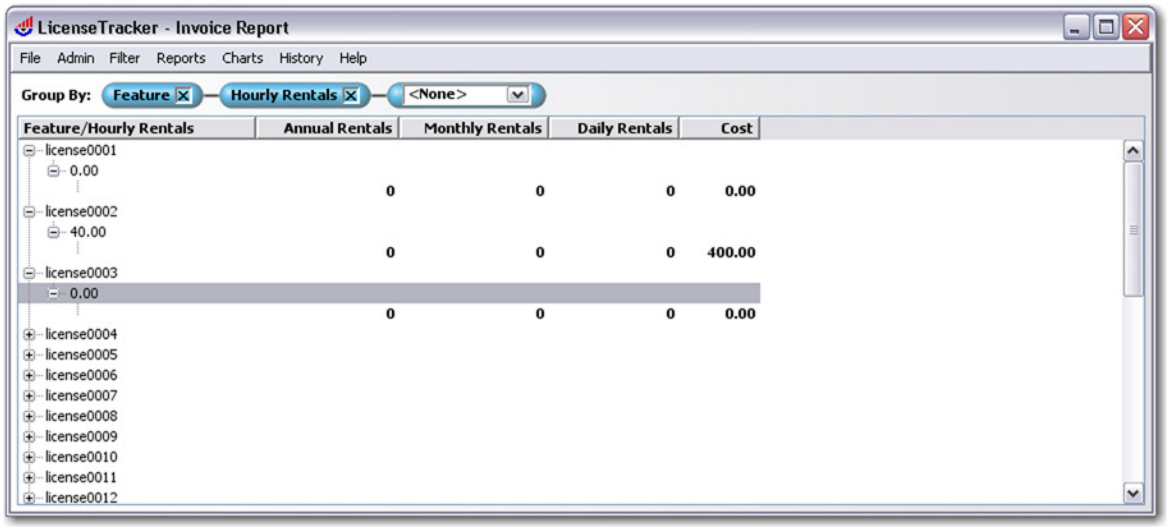
Identifies the number of hourly license rentals for this feature in the period.

Cost

The amount of money due for license rentals for this feature. This is the sum of the products of the number of rentals from the other columns multiplied by the rental rates as specified in the License Model.

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* **+** ***sign*** *in front of the selected group parameters.*

Figure 33: Summary Invoice Report



Detailed Invoice Report

This section describes the **Detailed Invoice Report** and how to generate it.

What is the Detailed Invoice Report?

The **Detailed Invoice Report** is a table that displays detailed information about rented license usage over time. The report displays the periods when rental licenses were used. Note that this tracking tracks concurrent use levels and not specific sessions so that a single user session may start with a rented license (because all owned licenses were in use at the time of checkout) but complete with an owned license (if other users' sessions ended earlier dropping the concurrent use level below the number of owned licenses.

It displays information under the following headings:

Feature

The feature name(s) that this rented level interval measures.

Start Date

The date and time at which this rented license interval started; this is the time that a new user session of this feature began requiring a rented license.

End Date

The date and time at which a user logged out, causing the concurrent use level for the feature to drop below the specified level for this interval.

Overlap (Hrs)

The number of hours between the **Start Date** and **End Date**.

Rented License

The rented license number (for example, if four licenses for the feature were owned and the session which started at **Start Date** raised the concurrent use count to six, then this interval would be for rented license #2).

How to Generate the Detailed Invoice Report

To create this report:

TASK

1. Click **Reports** > **Detailed Invoice...** to open the **Invoice Detail Report** dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones and activate the **Use Filter** button with a check mark. The **Filter** button should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42.
4. Identify the license name(s) that you want to display and use to calculate statistics in the report. You can select more than one name in the list.

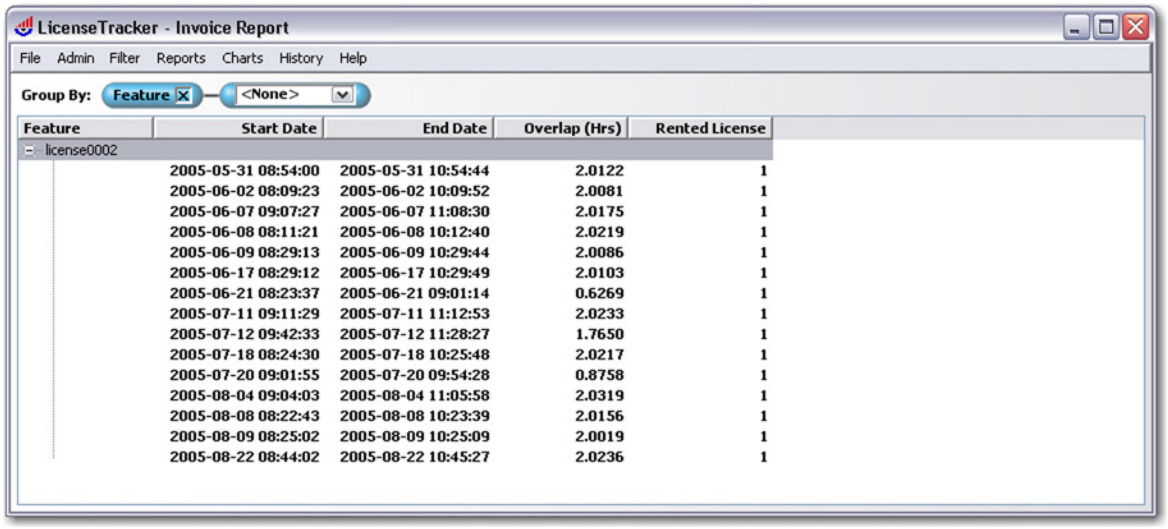
   ADDITIONAL INFORMATION: Use the **SHIFT** or **CONTROL** keys to select individual license names or press the **Select All** button to use all license names in your report.
5. Click **OK**.

RESULT:

The **Detailed Invoice Report** appears.

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

Figure 34: Detailed Invoice Report



License Model Efficiency Report

This section describes the **License Model Efficiency Report** and how to generate it.

What is the License Model Efficiency Report?

The **License Model Efficiency Report** is a table that displays peak license usage and cost consequences. The report shows features with unused licenses at the top and features where demand exceeded owned licenses levels at the bottom. The report is sorted based on a calculation of license use called **Value, where items of the same value are ordered based on the number of denials**.

It displays information under the following headings:

Feature Name

The name of an individual feature (that is, the application name).

License Count

The number of purchased licenses.

NOTE: When zero is in this column, all licenses of this feature are rented (none are owned).

Peak Usage

The maximum number of licenses used, for each feature, over the time span specified in your **Select the parameters for a filter** dialog (under **Filter > Set Filter...**).

Peak Usage - License Overage

The number of licenses where usage exceeded the purchased limits and the cost of the license became a rental classification.

Denials

The number of requests that were denied to users because the existing licenses where already checked out.

Value

License overage multiplied by average license cost from License Model.

A negative number indicates that a license is under used and that you own more licenses than you are using in the specified date range.

A positive number indicates that a license is overused (requiring rentals) and that you require more licenses to accommodate the usage demands in the specified date range.

Value is important for analyzing license usage cycles over time.

Monthly Rentals

Refers to the number of monthly rentals for this feature in the period.

Hourly Rentals

Refers to the number of hourly rentals for this feature in the period.

Total Cost

Sum of all rental costs for this feature in the period.

How to Generate the License Model Efficiency Report

TASK

1. To create this report in *LT Analyzer*, click on **Reports > License Model Efficiency.**
2. Click **Filter** to open the **Set the Filter Parameters** dialog, review your values or set new ones and activate the **Use Filter** button with a check mark. The **Filter** button should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40. Click OK to return to the Feature Efficiency Report dialog.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42.

4. Identify the license name(s) that you want to display and use to calculate statistics in the report. You can select more than one name in the list.

   ADDITIONAL INFORMATION: Use the **SHIFT** or **CONTROL** keys to select individual license names or press the **Select All** button to use all license names in your report.

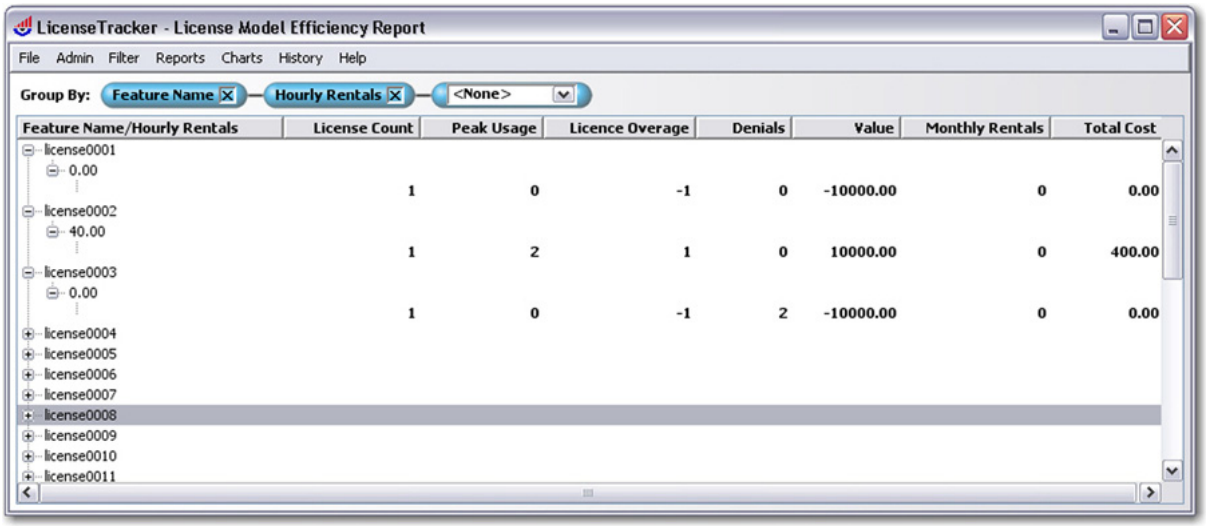
5. Click **OK**.

RESULT:

A computation window opens to show the progress of the calculations. When the calculations are complete the License Model Efficiency Report appears.

NOTE: *The initial view of the report may be expanded by selecting parameters in the* ***Group By*** *widget and clicking on the* ***+ sign*** *in front of the selected group parameters.*

Figure 35: License Model Efficiency Report


LicenseTracker - License Model Efficiency Report
File Admin Filter Reports Charts History Help
Group By: Feature Name Hourly Rentals <None>
Feature Name/Hourly Rentals | License Count | Peak Usage | Licence Overage | Denials | Value | Monthly Rentals | Total Cost
license0001
0.00 1 0 -1 0 -10000.00 0 0.00
license0002
40.00 1 2 1 0 10000.00 0 400.00
license0003
0.00 1 0 -1 2 -10000.00 0 0.00
license0004
license0005
license0006
license0007
license0008
license0009
license0010
license0011

Account Report

What is the Account Report?

The account report provides details and transaction history for one account.

How to Generate the Account Report

TASK

1. Select **Reports** > **Account**. The **Account Report** dialog opens.
2. Select the account that the report will be generated from and click **OK**
3. Click **Filter** to open the **Set the Filter Parameters** dialog, review your values or set new ones and activate the **Use Filter** button with a check mark. The **Filter** button should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40. Click OK to return to the Account Report dialog.
4. Click **OK** to generate the Account Report.

Account Summary Report

What is the Account Summary Report?

The account report provides a list of all accounts and their balances.

How to Generate the Account Summary Report

TASK

1. Select **Reports** > **Account Summary**.
2. The Account Report is generated automatically.

Producing *LT Analyzer* Charts

This section guides you through the procedures that create and display pie and bar charts in *LT Analyzer*.

PREREQUISITE:: *This section assumes that you already understand the fundamental concepts of LT Analyzer. If you are not familiar with LT Analyzer then go to* *"Fundamental Concepts" on page 17.*

About Charts

This section contains information that help you identify the various *LT Analyzer* charts and procedures for setting general chart parameters.

The Charts Menu

LT Analyzer charts are listed under the **Charts** menu. They are:

Users Chart

Displays usernames and the hours of feature usage over a specified time span.

Features Chart

Displays feature names and one of three usage metrics (hours, number of distinct users, maximum concurrent users) over a specified time span.

License Usage Level Chart

Displays the total number of hours of usage for each of the licenses of a selected feature over a specified time span.

Feature Average Week Chart

Displays the average concurrent user levels for a specified feature over a specified time span.

Concurrent Use Chart

Displays the usage over time for a single feature in terms of number of concurrent users.

Concurrent Use Analysis

Displays an analysis over time for a single feature

Change in Usage

Displays the change in usage over time for a single feature in terms of total time.

Session Chart

Displays each session (start and end times) for a single feature over a specified time span.

Session Length Chart

Displays a histogram depicting the lengths of all sessions for a single feature over a specified time span.

Group Use Chart

Displays how many members of a specific group (sharing the same attribute for a user category) make use of specified features over a specified time span.

Denial Density Chart

Displays the number of denials per specified time unit (1 hour, 3 hours, 1/2 day, etc.) that occurred for a single feature over time.

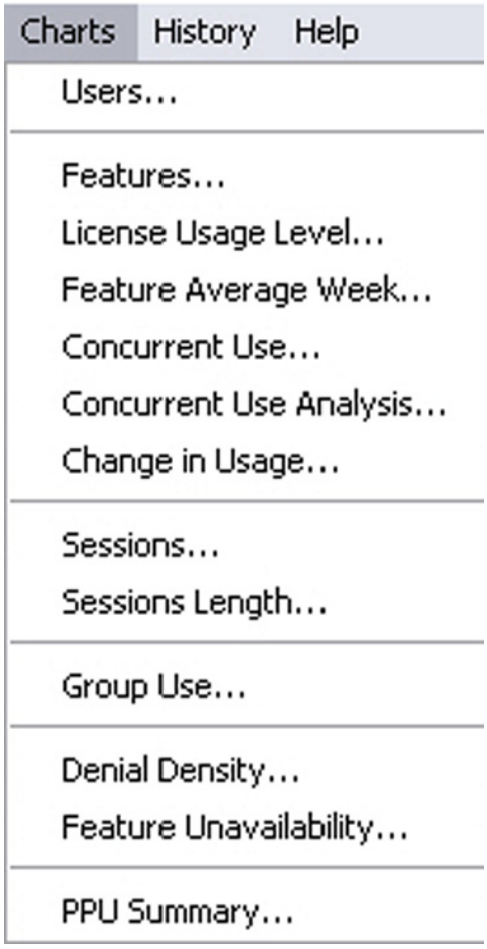
Feature Unavailability Chart

Displays when all owned licenses for a single feature were in use. This shows times when denials would have happened.

Pay-per-Use (PPU) Summary Chart

Displays an assessment of pay-per-use expenditures (rentals) comparing what was budgeted versus what was actually spent over a specified time span. Both monthly and cumulative views are provided.

Figure 36: Charts Menu



Setting Filter Parameters for Charts

What are Filter Parameters for Charts?

Chart filters allow you to specify the data that will appear in a chart.

How to set Filter Parameters for Charts

In *LT Analyzer*, there are two dialogs that allows you to refine the data that you display in a chart.

TASK

1. Set data filters in the Set the Filter Parameters dialog and then click the **Use Filter** button to activate them with a check mark.

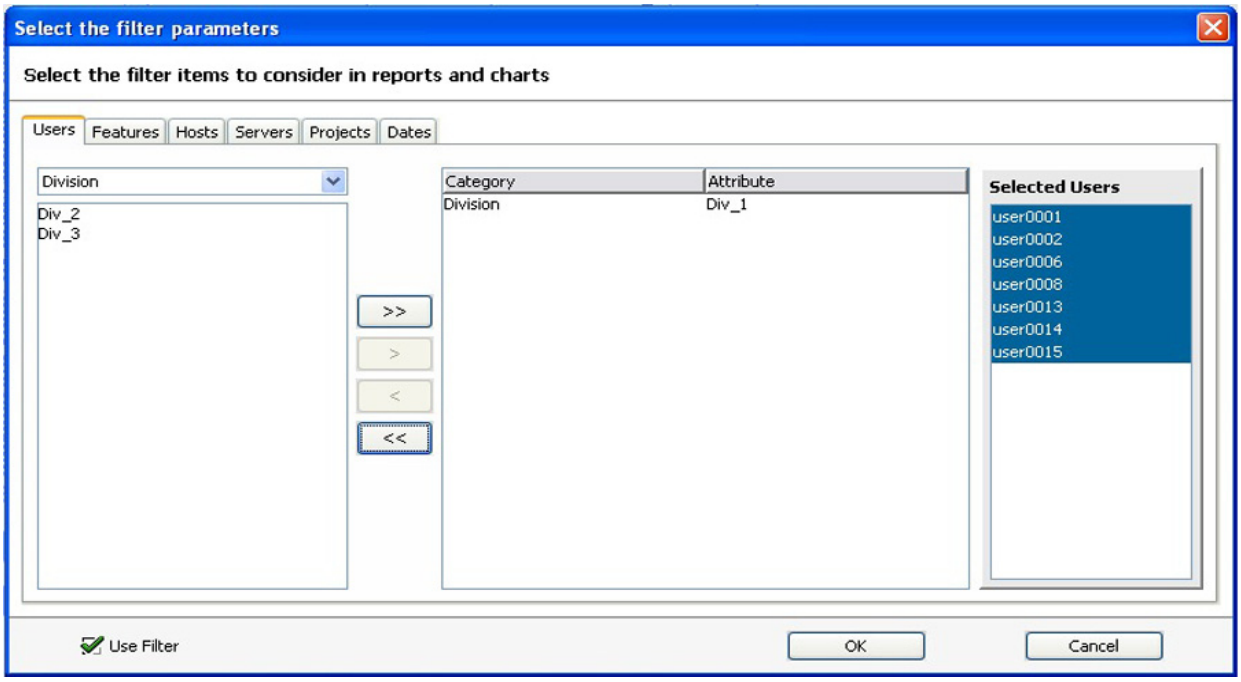
   ADDITIONAL INFORMATION: To deactivate the filters, simply click on the button again, to remove the check mark and *LT Analyzer* will use all of the data in your database. For more information, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.

   There are two ways to access this dialog:

   a Click **Admin** > **Set Filter...** ,or

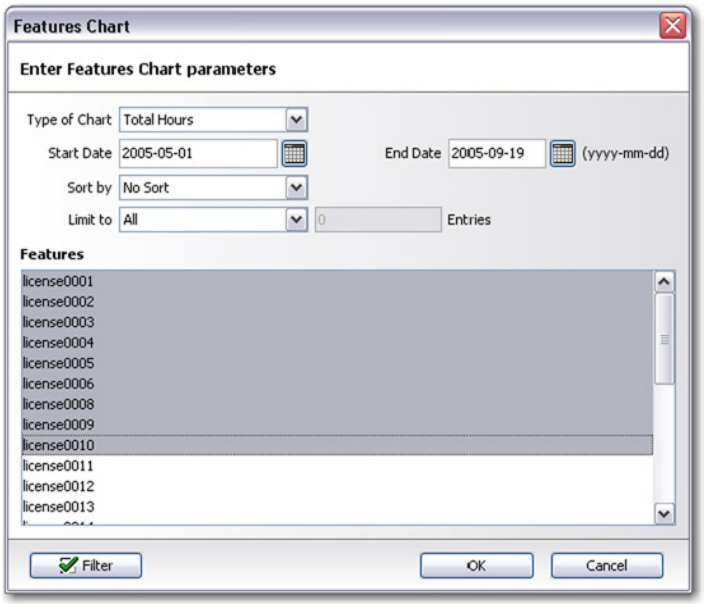
   b Press the **Filter** button in any chart dialog.

Figure 37: Specifying Filters in the Set Filter Parameters Dialog



2. You can indicate additional sorting parameters to further refine and organize your data in each chart dialog. Different chart dialogs offer different parameters under the following categories:
   - **Data Parameters** - usernames, license names, or group names, depending on the chart
   - **Usage Parameters** - high values, low values or all values
   - **Time Parameters** - time range. See **"How to set the Date Range for Reports or Charts"** on page 42.

Figure 38: Specifying Filters in the Chart Dialog



Setting the Date Range for Charts

What is the Date Range for Charts?

All chart dialogs allow you to specify a date range in the text fields labelled **Start Date** and **End Date**.

How to set the Date Range for Charts

When you first open a chart dialog, there is a time interval already specified in **Start Date** and **End Date** fields. These dates are set by:

- The date range specified in the Set Filter Parameters dialog, accessed under **Filter** > **Set Filter...**, that was activated with a check mark beside **Use Filter**, or
- if that dialog was not activated (i.e., no check mark), then from the session statistics (that is, the log files) in your *LT Analyzer* database.

To further limit the time interval displayed in your chart, fill in the fields for **Start Date** and **End Date** using one of the following procedures:

TASK

1. Double-click on the text field values in **Start Date** and **End Date** and type in new ones using the format YYYY-MM-DD (year-month-day), or
2. Open the calendar by clicking the square button beside the text field. Then
   a Select the year and month from small pull-down menus and then click on the actual calendar day.
   b The calendar will close automatically after you click on the day.

   ADDITIONAL INFORMATION: You can close the calendar by clicking the square button with the X, in the upper right corner.

   RESULT: The new date displays automatically in the field.

   ADDITIONAL INFORMATION: If the calendar is shadowed and is not accessible, then you have selected a date when no data exists in your *LT Analyzer* database. At this point, you must
   - choose another date when data exists, or
   - import more data to cover the time you need for the chart.

RESULT:

The Start and End Dates set by you will be used to filter the data used for this particular chart or report.

Setting the Chart Format to Pie or Bar

What is the Format for Charts?

LT Analyzer allows you to choose, where applicable, between bar charts and pie charts to best represent your dataset.

How to set the Format for Charts to Pie or Bar

To open the Preferences dialog to specify the default chart display.

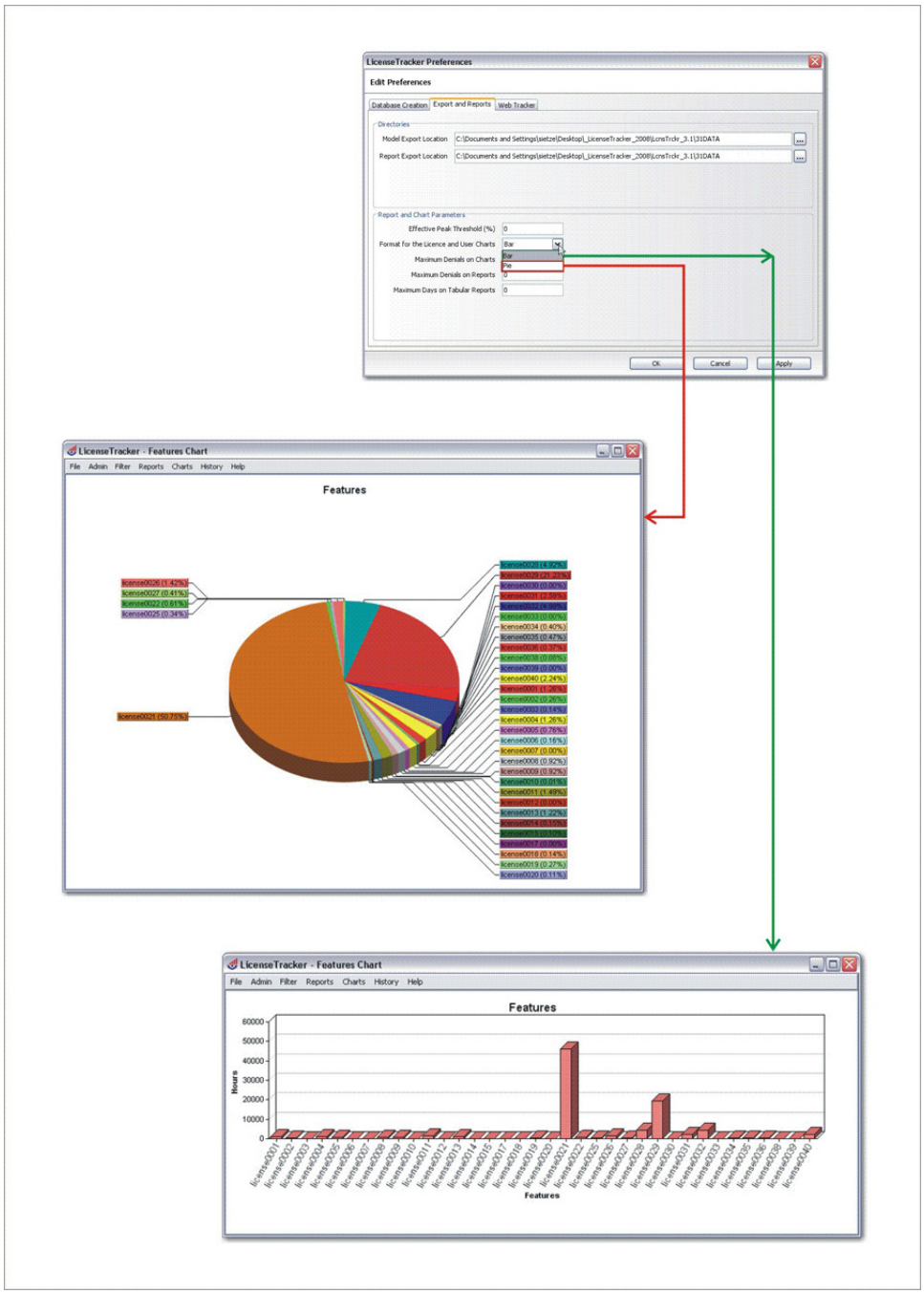
TASK

1. Click **File** > **Preferences** to open the preferences dialog.
2. Select the tab **Export and Reports**.
3. Under the heading **Report Parameters**, go to the item labelled **Format** for the **License and User Charts**.
4. Click on the arrow beside this field to open a pull-down menu.
5. Select the option **Pie** or **Bar**.
6. Click **Apply**.

RESULT:

When the **Bar** option is specified, all charts will be bar charts, as specified. When the **Pie** option is specified, pie charts will be generated if possible (i.e., when the parameters add up to 100%), otherwise a bar chart will be generated.

Figure 39: Specifying Bar Chart or Pie Chart Parameters



Users Chart

What is the Users Chart?

The Users Chart displays usernames and the hours of feature usage over a specified time range. *LT Analyzer* allows you to sort the usernames and rank your display from the highest or lowest values.

How to Generate the Users Chart

TASK

1. Click **Charts > Users...** to open a chart dialog.
2. Click **Filter** to open the **Set the Filter Parameters** dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42.
4. Click the button beside **Sort** to display a pull-down menu and select an option for organizing data:
   - **No Sort** - indicates that no organizing of the data occurs.
   - **By Name** - names are arranged in alpha-numerical order.
   - **By Value** - the arrangement of names in alphanumeric order based on usage hours.
5. Click the button beside **Limit** to and display a pull-down menu where you select an option that identifies your chart data
   - **All** - includes all users selected in the dialog.
   - **Highest** - includes users with the highest usage hours.
   - **Lowest** - includes the users with the lowest usage hours.

   ADDITIONAL INFORMATION: This option determines which subset of the selected users are displayed on the chart

6. In the **Users** window, click on the name(s) you want in your chart using the mouse with the **SHIFT** or **CONTROL** keys.
7. Click **OK** to close the dialog.

RESULT:

Depending on which option you selected (tabular or pie), you will get one of the following charts:

Figure 40: Users Chart (tabular)

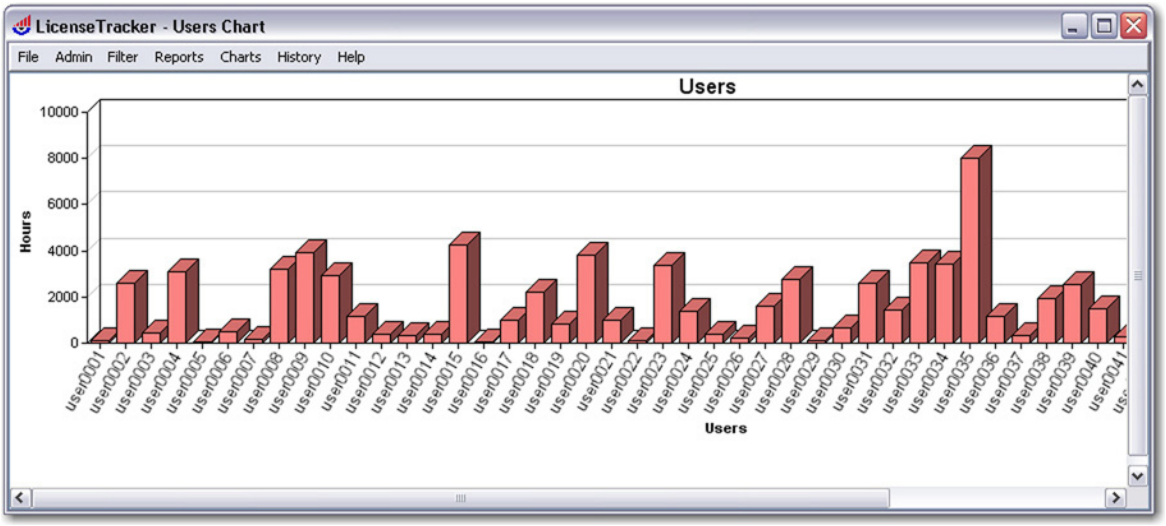
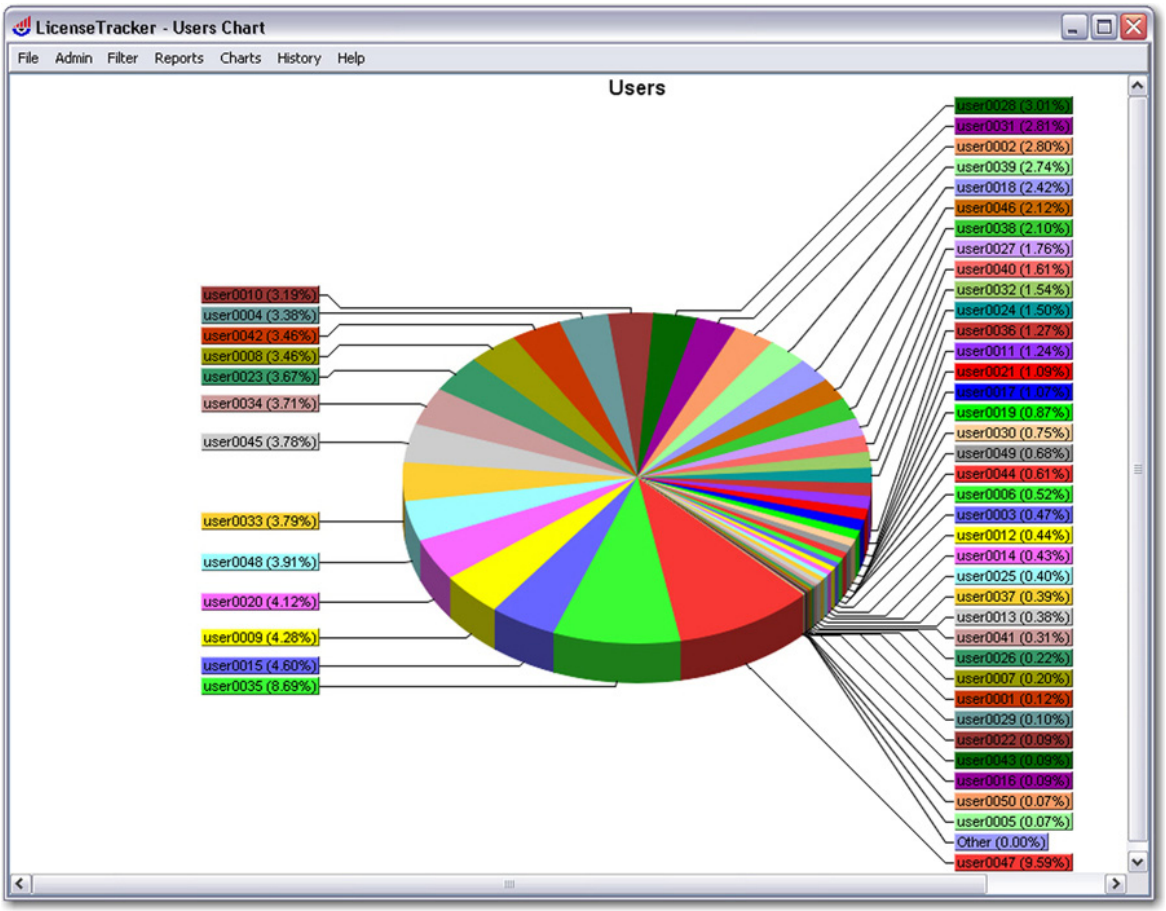


Figure 41: Users Chart (pie)



Features Chart

What is the Features Chart?

The Features Chart displays either total usage in hours, maximum concurrent users or number of distinct users for multiple features over a specified time period. *LT Analyzer* allows you to sort the license names and rank your display from the highest or lowest values.

How to Generate the Features Chart

To create this chart in *LT Analyzer*:

TASK

1. Click **Charts > Features...** to open a chart dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Make a selection in the **Type of Chart** pull-down menu. You can choose one of:
   - **Total Hours**
   - **Peak Concurrent Licenses**
   - **Unique Users**
4. Define a time interval in the **Start Date** and **End Date** text fields using the procedures in **"How to set the Date Range for Reports or Charts"** on page 42,
5. Click the button beside **Sort** to display a pull-down menu and select an option for organizing data:
   - **No Sort** - indicates that no organizing of the data occurs.
   - **By Name** - names are arranged in alpha-numerical order.
   - **By Value** - the arrangement of names in alphanumeric order based on usage hours.
6. Click the button beside Limit to display a pull-down menu where you select an option that identifies your chart data:

   ADDITIONAL INFORMATION: This option determines which subset of the selected features are displayed on the chart.
   - **All** - includes all features selected in the dialog.
   - **Highest** - includes users with the highest values.
   - **Lowest** - includes the users with the lowest usage hours.
7. In the **Features** window, select the license name(s) that you want to chart using the mouse with the **SHIFT** and **CONTROL** keys.
8. Click **OK** to close the dialog and open a computation window that calculates the parameters and then displays the chart.

RESULT:

Figure 42: Features Chart (tabular)

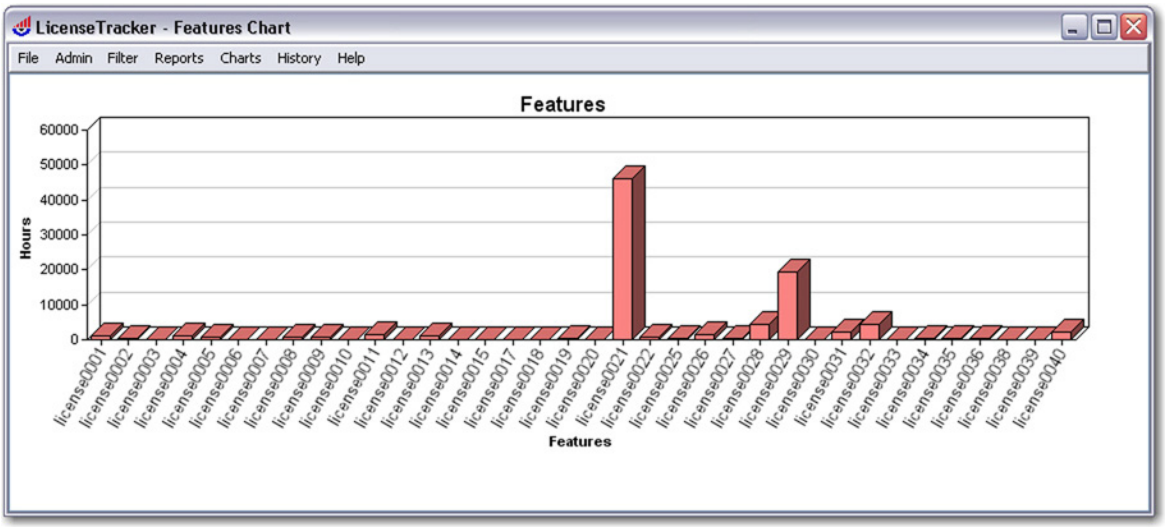
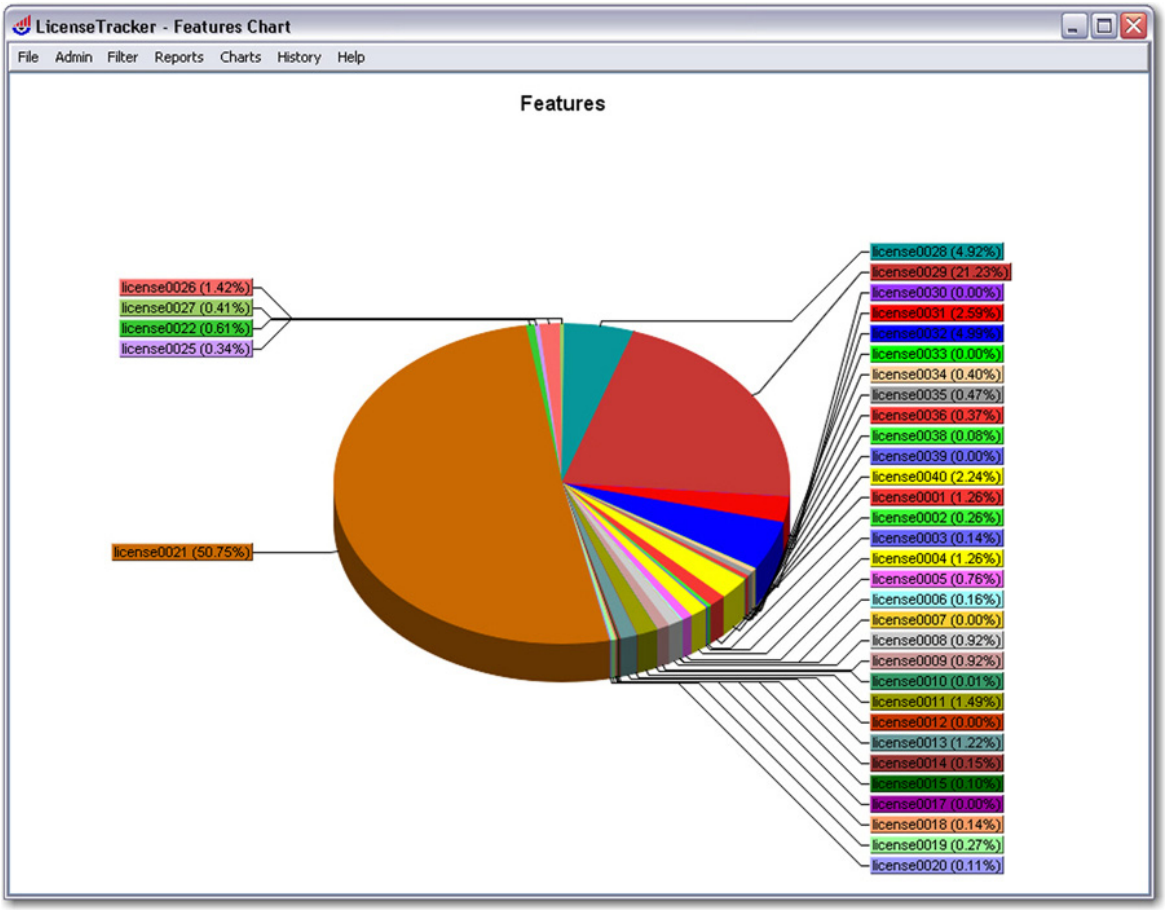

LicenseTracker - Features Chart
File Admin Filter Reports Charts History Help
Features
Hours
60000
50000
40000
30000
20000
10000
0
license0001 license0002 license0003 license0004 license0005 license0006 license0007 license0008 license0009 license0010 license0011 license0012 license0013 license0014 license0015 license0017 license0018 license0019 license0020 license0021 license0022 license0025 license0026 license0027 license0028 license0029 license0030 license0031 license0032 license0033 license0034 license0035 license0036 license0038 license0039 license0040
Features

Figure 43: Features Chart (pie)



License Usage Level Chart

What is the License Usage Level Chart?

The License Usage Level Chart shows the total time (on the Y axis, in hours) that there were "N" concurrent licenses in use (the numbers on the X axis) for a particular license.

This chart can be used to determine if concurrent licenses really are needed for a particular license. The more the Nth license is used, the more confident you can be that at least N licenses are needed.

How to Generate the License Usage Level Chart

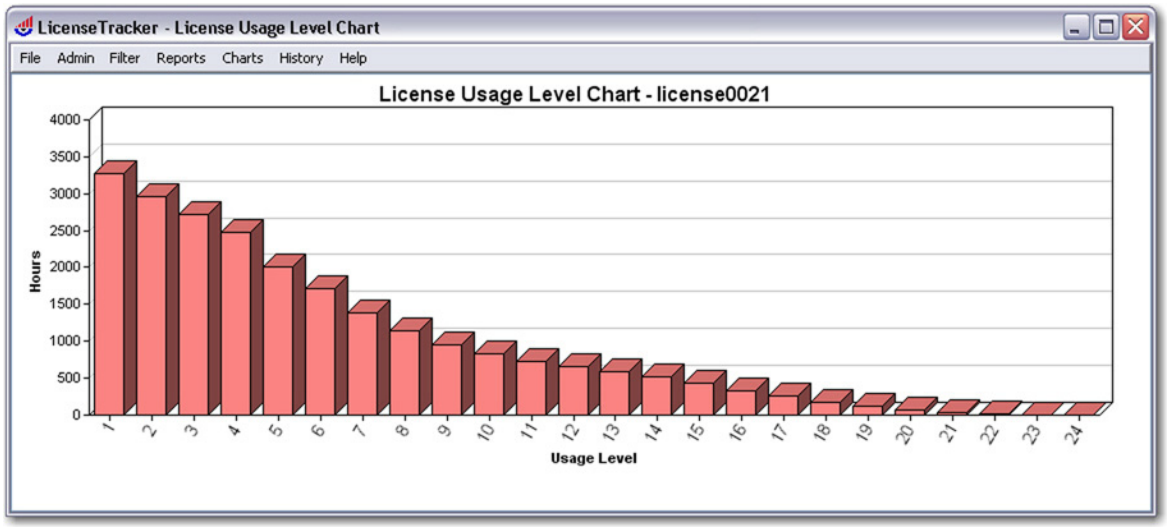
TASK

1. Click **Charts > License Usage Level...** to open a chart dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42,
4. In the **Features** window, click on one license name that you want to chart.
5. Click **OK** to close the dialog and create the chart.

RESULT:

In the resulting chart each column identifies for each license for a feature (X axis) how many hours it was in use (Y axis).

Figure 44: License Usage Level Chart



Feature Average Week Chart

What is the Feature Average Week Chart?

The Feature Average Week Chart shows a graph of the average concurrent users as a function of the hour of the day and day of the week.

This graph can be used to determine if there are patterns to when this feature is used.

How to Generate the Feature Average Week Chart

To create this chart in *LT Analyzer*:

TASK

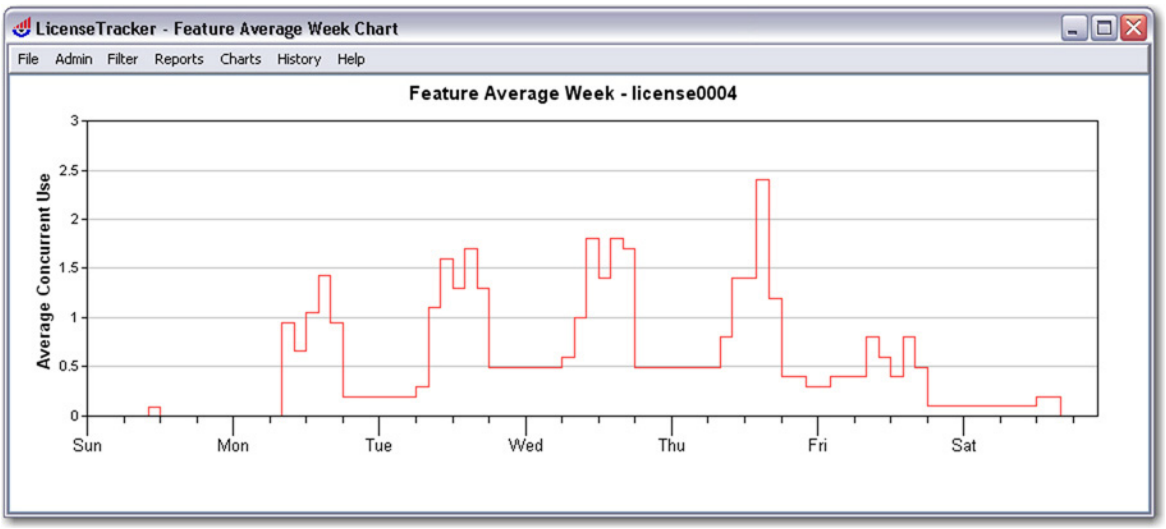
1. Click **Charts** > **Feature Average Week...** to open a chart dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.

3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42,
4. In the **Features** window, click on one license name that you want to chart.
5. Click **OK** to close the dialog and create the chart.

RESULT:

In the resulting chart the red line shows the average number of users using a feature concurrently throughout an average day and day of the week.

Figure 45: Feature Average Week Chart



Concurrent Use Chart

What is the Concurrent Use Chart?

The **Concurrent Use Chart** displays concurrent user counts for a specified feature, over a specified time range.

How to Generate the Concurrent Use Chart

To create this chart in *LT Analyzer*:

TASK

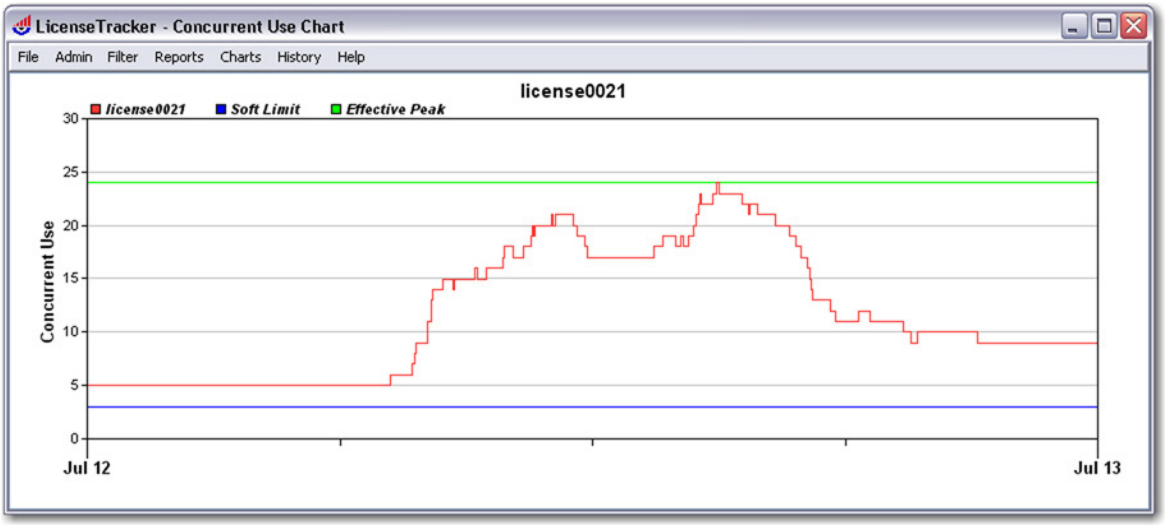
1. Click **Charts > Concurrent Use...** to open a chart dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42,
4. In the **Features** window, click on one license name that you want to chart.
5. Click **OK** to close the dialog and create the chart.

RESULT:

In the resulting chart:

- The red line indicates the time varying concurrent user count.
- The blue line indicates the number of licenses owned as specified in the License Model.
- The green dots indicates the occurrence of denials.
- The green line indicates the effective peak, determined by rounding down a certain percentage of the actual peaks.

Figure 46: Concurrent Use Chart



Concurrent Use Analysis Chart

What is the Concurrent Use Analysis Chart?

The **Concurrent Use Analysis Chart** consists of two related displays: the chart that appears initially is identical to the Concurrent Use Chart that is described in **"What is the Concurrent Use Chart?"** on page 98. When you click in this chart, the second chart displays below the first one and shows you all individual users that were connected at that particular point in time; this chart is in effect the Sessions Chart for that moment in time, as described in **"What is the Sessions Chart?"** on page 104.

How to Generate the Concurrent Use Analysis Chart

To create this chart in *LT Analyzer*:

TASK

1. Click **Charts > Concurrent Use Analysis...** to open a chart dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42,
4. In the **Features** window, click on one license name that you want to chart.
5. Click **OK** to close the dialog and create the initial chart.
6. In the initial chart, click at your point of interest.

   STEP RESULT: A vertical line appears at the point where you clicked, indicating the date and time. A second chart appears, showing all users that were connected at that time, each with a bar indicating the extent and origin of their connection.

   NOTE: *A red bar indicates a long session, while a green bar indicates a short session.*

7. Drag the vertical line in the initial chart to your next point of interest.

   STEP RESULT: The display of the second chart changes to reflect the new point in time (as well as all points in between).

RESULT:

In the resulting initial chart:

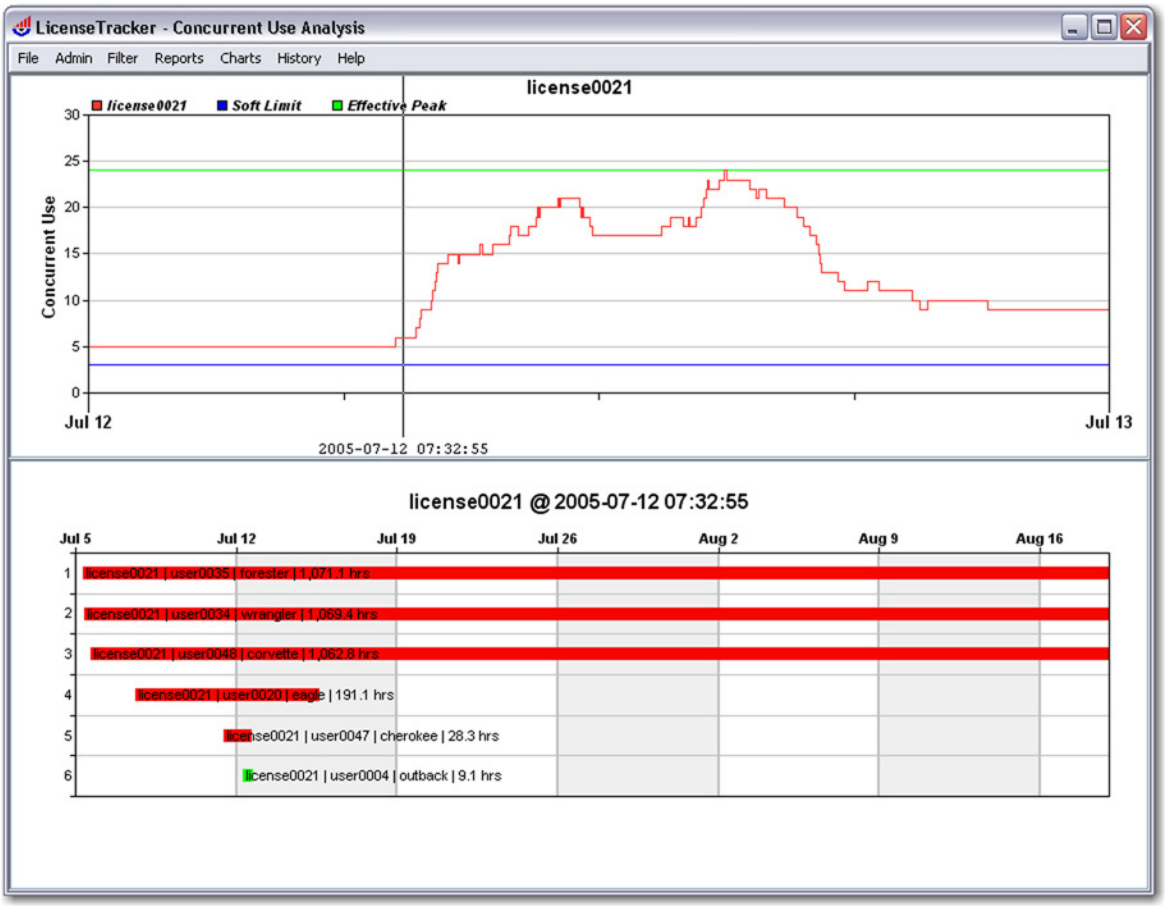
- The red line indicates the time varying concurrent user count.
- The blue line indicates the number of licenses owned as specified in the License Model.
- The green dots indicates the occurrence of denials.
- The green line indicates the effective peak, determined by rounding down a certain percentage of the actual peaks.

In the second chart:

- The time in the heading corresponds to the location of the vertical line in the first chart.
- The colored bars indicate users connected at that time; the length of a bar corresponds to the length of the session, while a red color indicates a long session, and a green color a short session.

The two charts can be resized to accommodate larger amounts of data.

Figure 47: Concurrent Use Analysis Chart


LicenseTracker - Concurrent Use Analysis
File Admin Filter Reports Charts History Help
license0021
license0021 Soft Limit Effective Peak
Concurrent Use
30
25
20
15
10
5
0
Jul 12
Jul 13
2005-07-12 07:32:55
license0021 @ 2005-07-12 07:32:55
Jul 5 Jul 12 Jul 19 Jul 26 Aug 2 Aug 9 Aug 16
1 license0021 | user0035 | forester | 1,071.1 hrs
2 license0021 | user0034 | wrangler | 1,069.4 hrs
3 license0021 | user0048 | corvette | 1,062.8 hrs
4 license0021 | user0020 | eagle | 191.1 hrs
5 license0021 | user0047 | cherokee | 28.3 hrs
6 license0021 | user0004 | outback | 9.1 hrs

Change In Usage Chart

What is the Change In Usage Chart?

The **Change In Usage Chart** displays change in total amount of usage in hours for a specified feature, over a specified time range.

NOTE: *All changes shown are relative to the first period shown in the chart.*

How to Generate the Change In Usage Chart

To create this chart in *LT Analyzer*:

TASK

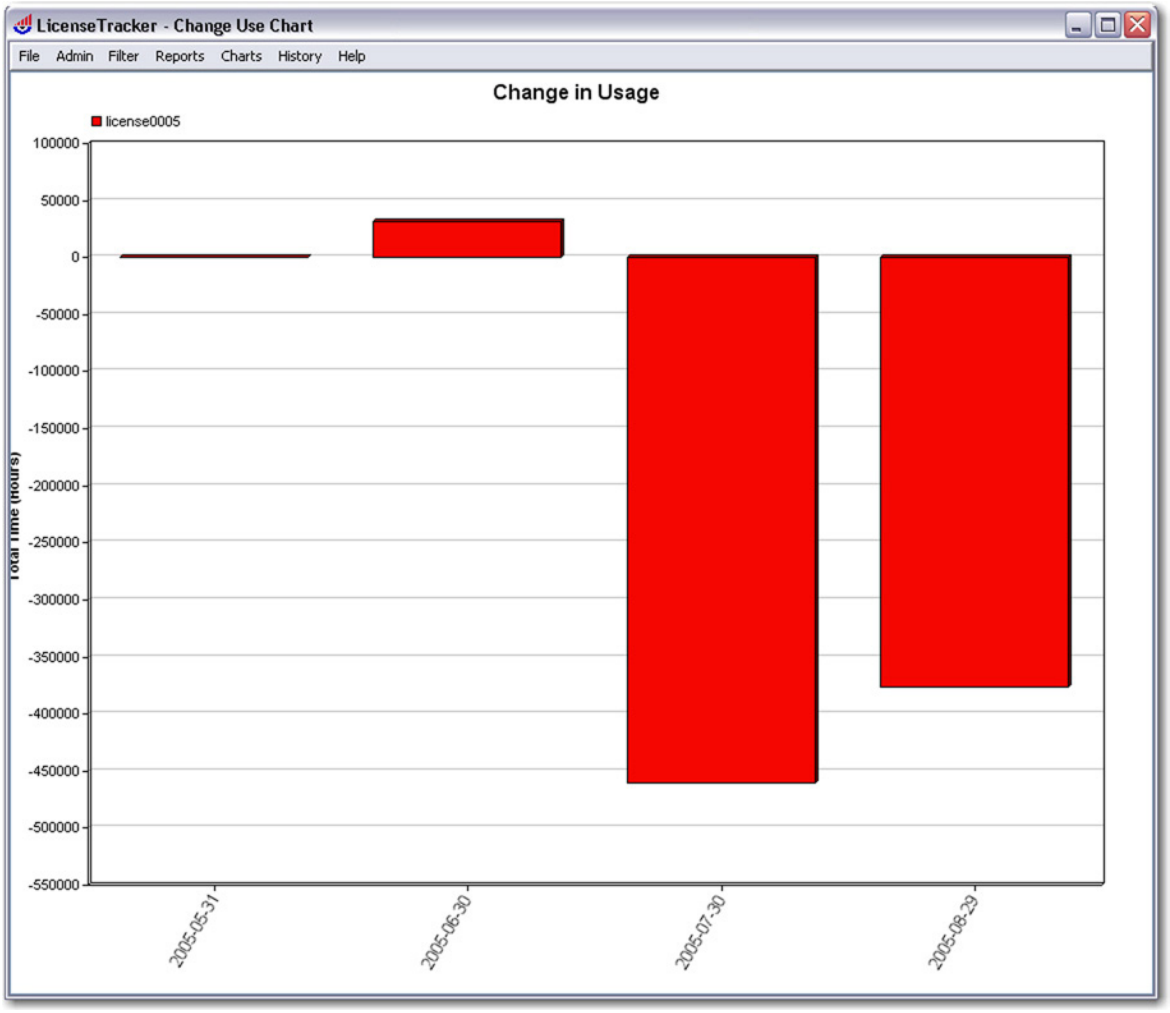
1. Click **Charts** > **Change In Usage...** to open a chart dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42,
4. Select a level of detail (period of time) in the **Level of Detail** text field.
5. In the **Features** window, select one or more license names that you want to chart.
6. Click **OK** to close the dialog and create the chart.

RESULT:

In the resulting chart:

- The baseline for each feature is determined by the usage in the first period of time (day, week or month), and is indicated by a colored line.
- The bars for each feature and period represent increased and decreased usage relative to the base line.
- The vertical axis represents hours of use.
- The horizontal axis represents time.

Figure 48: Change In Usage Chart



Sessions Chart

What is the Sessions Chart?

The Sessions Chart displays the monthly breakdown of sessions for a particular feature. In the resulting display:

- The green lines represent actual sessions.
- The red lines represent long sessions.

How to Generate the Sessions Chart

To create this chart in *LT Analyzer*:

TASK

1. Click **Charts > Sessions...** to open a chart dialog.
2. In the chart dialog select the period over which to display sessions activity. You can select:
   - A date range.
   - A specific date.
   - All of the sessions in the database (**At End of Data**).
3. Select a specific feature to display.

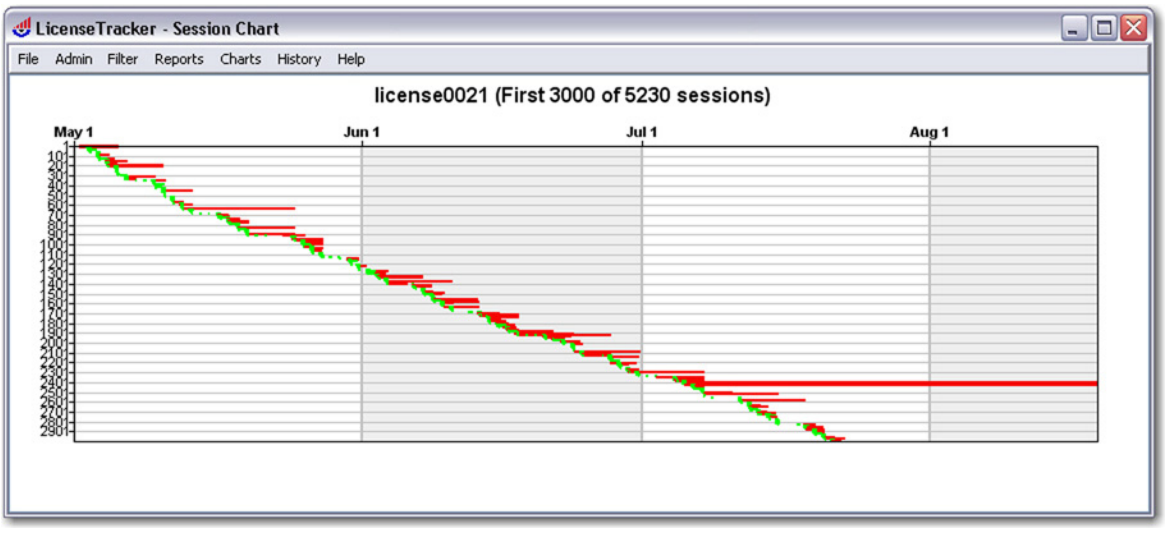
   ADDITIONAL INFORMATION: Selecting more than one feature is not allowed.
4. Click **OK** to close the dialog.

RESULT:

A computation window opens to show progress in calculating values for the chart. When the computation is complete the window closes automatically.

The Sessions Chart for the selected feature appears.

Figure 49: Sessions Chart



Sessions Length Chart

What is the Sessions Length Chart?

The **Sessions Length Chart** shows a count of how many sessions there were that lasted N hours for a particular license. This histogram can be used to recognize patterns in how the users consume a particular license.

How to Generate the Sessions Length Chart

To create this chart in *LT Analyzer*:

TASK

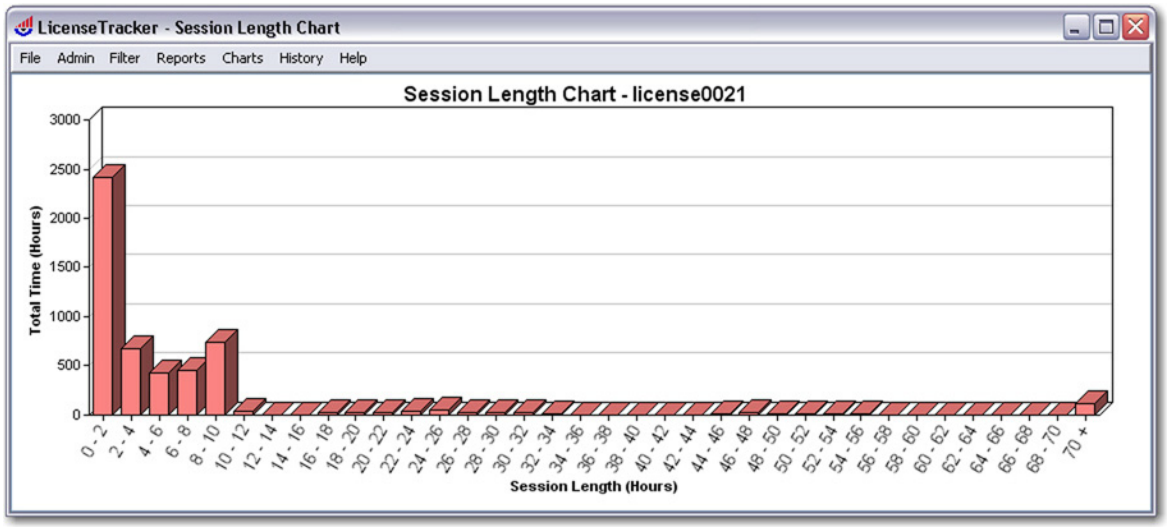
1. Click **Charts > Sessions Length...** to open a chart dialog.
2. Click **Filter** to open the Set the Filter Parameters dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark. The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the Set the Filter Parameters dialog, and should be empty when you do not want any data filtering. For more information about setting parameters in this dialog, go to **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42,
4. In the **Licenses** window, click on one license name that you want to chart.
5. Click **OK** to close the dialog.

RESULT:

A computation window opens to show progress in calculating values for the chart. When the computation is complete the window closes automatically.

The **Sessions Length Chart** for the selected license appears.

Figure 50: Sessions Length Chart



Group Use Chart

What is the Group Use Chart?

The **Group Use Chart** displays the number of users for each license. In the resulting bar chart:

- The height of the bar represents the number of users in the group
- The red shading indicates the number of users in the group using a license.

Note that a pop-up appears indicating the actual number of users as your cursor moves over the shaded part of a bar.

How to Generate the Group Use Chart

To create this chart in *LT Analyzer*:

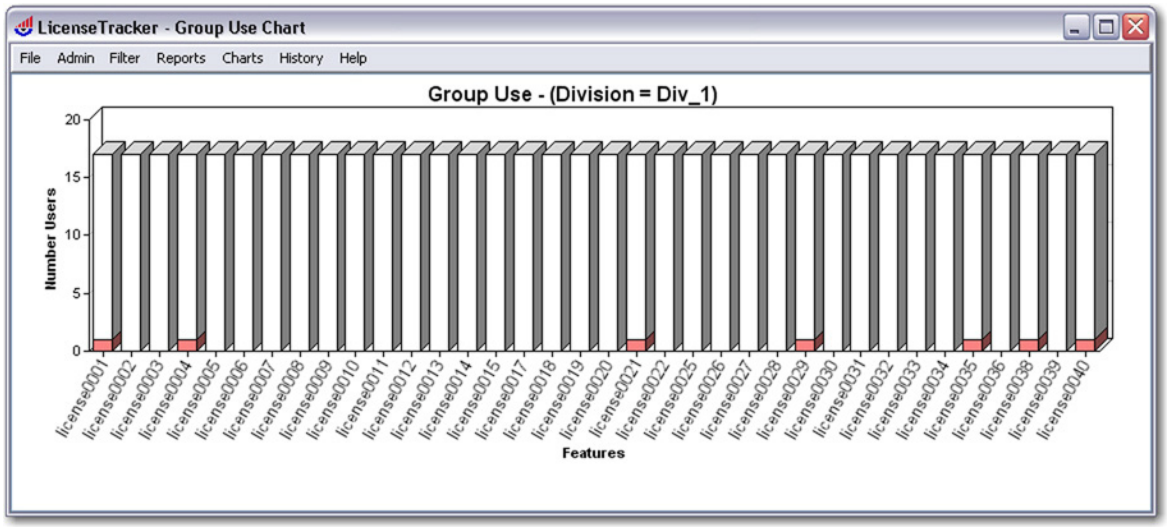
TASK

1. Click **Charts > Group Use...** to open a chart dialog.
2. In the chart dialog select the group.
3. Click **OK** to close the dialog.

RESULT:

The Group Use Chart for the selected group appears.

Figure 51: Group Use Chart



Denial Density Chart

What is the Denial Density Chart?

The denial density chart displays the number of denials found in the data for a particular license per unit time.

How to Generate the Denial Density Chart

To create this chart in *LT Analyzer*:

TASK

1. Click **Charts > Denial Density...** to open a chart dialog.

2. In the chart dialog select the following:
   a The date range.

   ADDITIONAL INFORMATION: By default the dates selected are the start and end date for all records in the database matching the content model selected. The date range can be adjusted in these date range fields.

   b The level of detail.

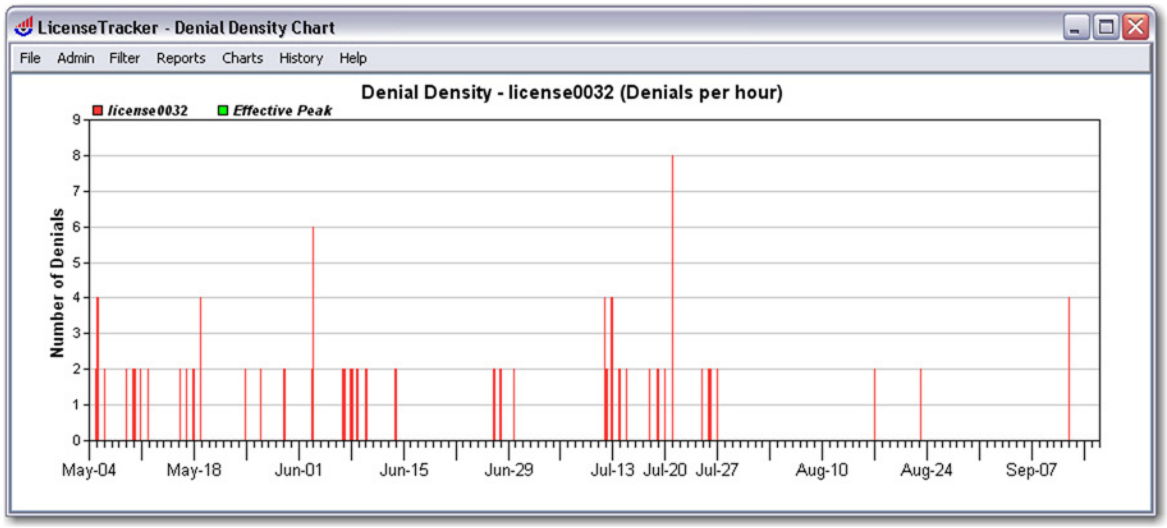
   ADDITIONAL INFORMATION: The level of detail is the unit of time in which denials will be counted. Options are 1 hour, 2 hours, 6 hours, 12 hours, one day and one week.

   c A license of interest.

   d *Optional step:* Select **Filter** at the bottom left of the dialog to open and use the **Select the Parameters for a Filter** dialog.
3. Click **OK** to close the dialog.

RESULT: The **Denial Density Chart** appears.

Figure 52: Denial Density Chart


LicenseTracker - Denial Density Chart
File Admin Filter Reports Charts History Help
Denial Density - license0032 (Denials per hour)
license0032
Effective Peak
Number of Denials
0 1 2 3 4 5 6 7 8 9
May-04 May-18 Jun-01 Jun-15 Jun-29 Jul-13 Jul-20 Jul-27 Aug-10 Aug-24 Sep-07

Feature Unavailability Chart

What is the Feature Unavailability Chart?

The Feature Unavailability Chart displays the total number of minutes a selected license was unavailable on each day over a selected time period.

How to Generate the Feature Unavailability Chart

To create this chart in *LT Analyzer*:

TASK

1. Click **Charts > Feature Unavailability...** to open a chart dialog.
2. In the chart dialog select the following:
   a The date range.

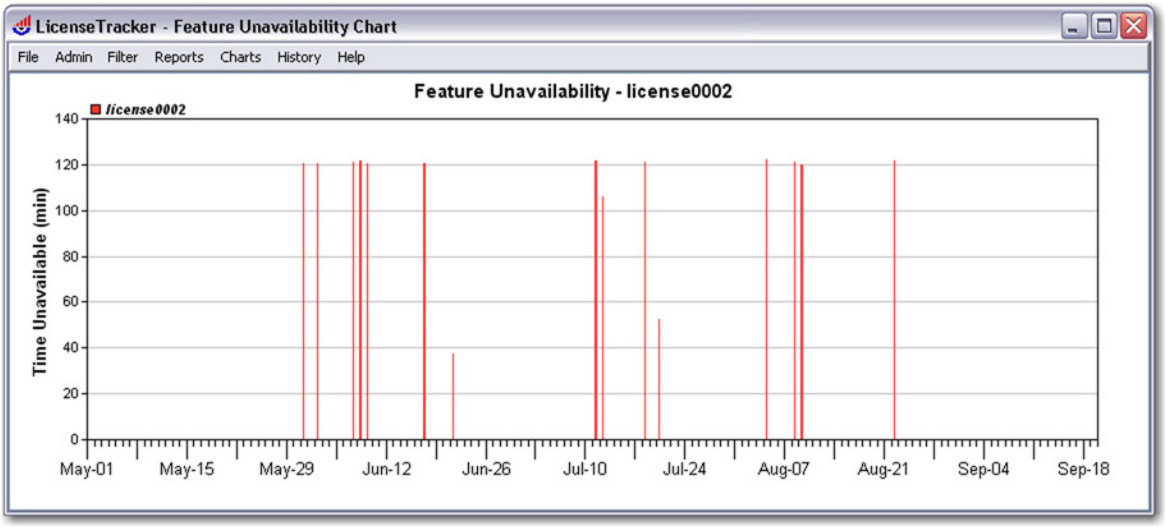
   ADDITIONAL INFORMATION: By default the dates selected are the start and end date for all records in the database matching the content model selected. The date range can be adjusted in these date range fields.

   b A license of interest.

   c *Optional step:* Select **Filter** at the bottom left of the dialog to open and use the **Select the Parameters for a Filter** dialog.
3. Click **OK** to close the dialog.

RESULT: The **Feature Unavailability Chart** appears.

Figure 53: Feature Unavailability Chart



Pay-per-Use (PPU) Summary Chart

What is the PPU Chart?

The **Pay-Per-Use Summary Chart** (PPU) displays the monthly breakdown for the total year's budget (not by license). In the resulting display:

- The green items represent the budgeted amounts.
- The red items represent the actual expenditures
- The bar chart component displays the individual monthly amounts.
- The line chart component displays the cumulative amounts.

How to Generate the PPU Chart

To create this chart in *LT Analyzer*:

TASK

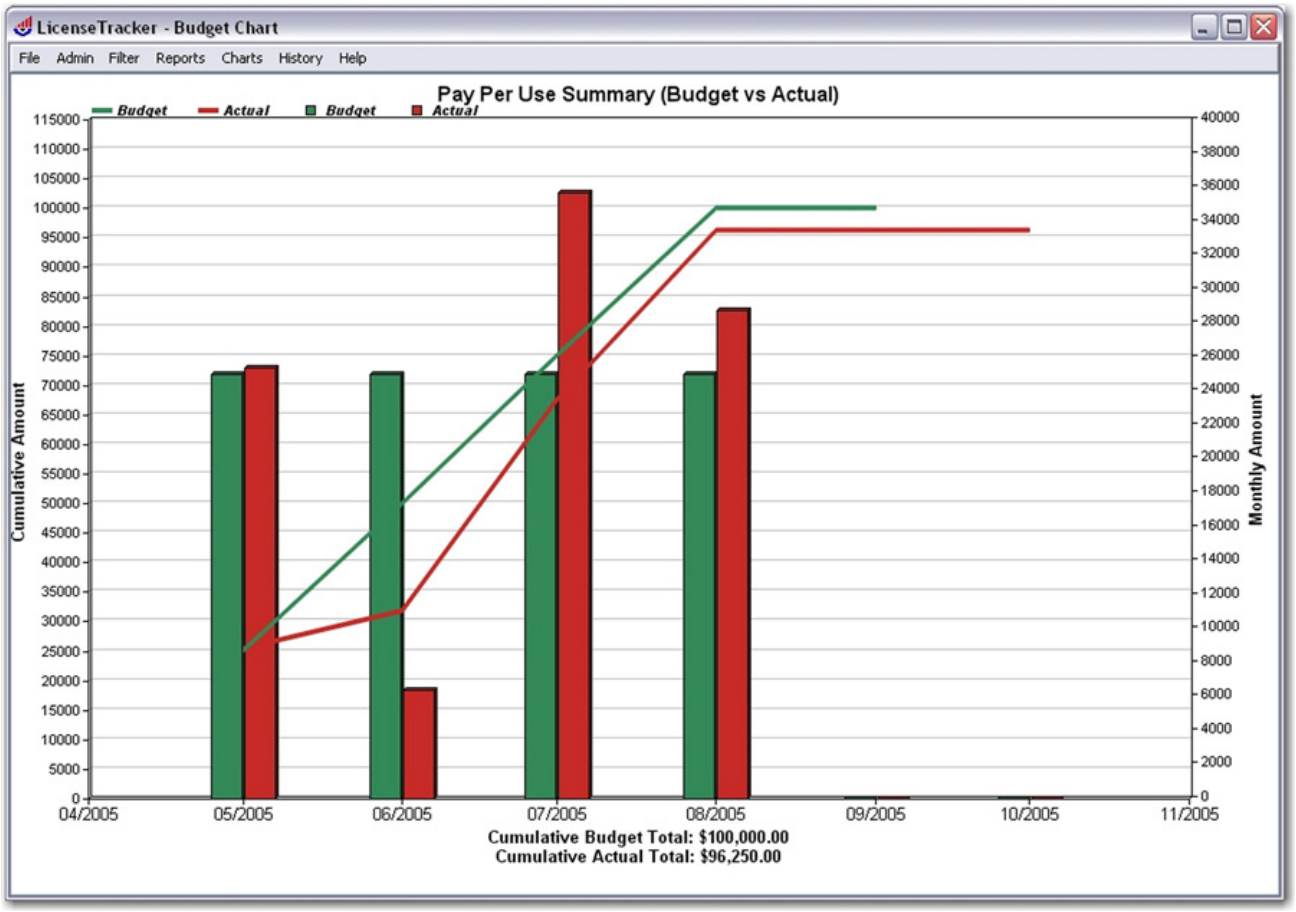
1. Click **Charts** > **PPU Summary...** to open a chart dialog.
2. Click **Filter** to open the **Set the Filter Parameters** dialog, review your values or set new ones, and activate the **Use Filter** button with a check mark.

   ADDITIONAL INFORMATION: The **Use Filter** button in the chart dialog should have a check mark in it when you want to use the parameters from the **Set the Filter Parameters** dialog, and should be empty when you do not want any data filtering. For more information on filtering see **"How to Change Filter Parameters for Reports and Charts"** on page 40.
3. Define a time interval in the **Start Date** and **End Date** text fields using the procedures described under the heading **"How to set the Date Range for Reports or Charts"** on page 42,
4. In the **Licenses** window, click on the license name(s) that you want to chart. For multiple selections, use the mouse with the **SHIFT** and **CONTROL** keys.

   ADDITIONAL INFORMATION: License selections only impact the actual component, the budget displayed is for all licenses, regardless of your selection.
5. Click **OK** to close the dialog and open a computation window that calculates the parameters and displays the chart.

RESULT:

Figure 54: PPU Summary Chart



Web Tracker

This chapter describes *Web Tracker*, which complements the *LT Analyzer* application and offers different ways to display *LT Analyzer* reports and monitor software usage.

In *Web Tracker* a single request can generate several *LT Analyzer* reports and charts packaged together in a comprehensive montage presentation for web viewing, browsing and analysis. A *Web Tracker* display facilitates inter-report navigation and enhances your understanding of the usage patterns.

NOTE: *This chapter requires that you already understand the fundamental concepts of LT Analyzer and know how to work within a computer screen to fill in text fields, make selections from a list in a window, and use buttons to display and select information. If you are not familiar with the principles of operation behind LT Analyzer and are also not familiar with how to use buttons, text fields and dialogs within the application, then go to* ***"Fundamental Concepts"*** *on page 17.*

Auto Tracker, a second module, is a stand-alone tool which enables automatic creation of *Web Tracker* reports. It is documented in the *LT Analyzer Administration Manual.*

Auto TrackerAlerts, a third module, is a stand-alone tool which enables automatic creation of e-mail alerts sent to designated recipients whenever a particular condition is matched in the log files. It is documented in the *LT Analyzer Administration Manual.*

Accessing *Web Tracker*

This section tells you how to access *Web Tracker* and *Web Tracker* reports.

Generating *Web Tracker* reports

This section tells you how to generate *Web Tracker* reports.

How to Generate *LT Analyzer* Reports with *Web Tracker*

PREREQUISITE

This procedure assumes that you can generate reports and charts using the **Reports** and **Charts** menus in *LT Analyzer*.

To generate a set of *LT Analyzer* reports with *Web Tracker* follow this procedure.

TASK

1. Open an existing *LT Analyzer* database.
   - If you do not have an existing *LT Analyzer* database or do not know how to open one, then refer to the *LT Analyzer* Administrator's Manual
2. There are two ways to display the reports:
   a Click on the **Reports > Web Tracker Historic** button to view previously generated *Web Tracker* reports. The Web Tracker Reports are displayed in a web browser and this procedure is complete.
   b Click on the **Reports > Web Tracker Compute** button to display the view **Report Parameters** dialog.
3. In the **Export Folder** field, enter or browse to the folder that the reports will appear in. In the **Report Scope** field, select a (previously defined) report scope.
4. Identify the reports you want to create in the **Report Parameters** dialog and click **OK** to start generating the output. A processing dialog is displayed.
   - Selected reports have a check mark beside them. *Web Tracker* remembers the reports that were last selected and re-selects them when the **Report Parameter** dialog is opened again. To deselect a report, simply click on it again to remove the check mark.
   - You can define a filter by clicking the **Filter** button in the bottom left.
   - When you have a large database and have also selected many or all the report types in the *Web Tracker* dialog (especially, **Long Sessions Reports**), the computation process can take several minutes, even hours, because of the volume of reports that are generated. Assign your time accordingly and be prepared to wait.
   - For a description of the reports and charts that you can create, go to **"Viewing Web Tracker Reports"** on page 115.
5. When you see the **Task Complete** message in the process dialog, the report generation process is finished.

RESULT:

When the report generation is complete, the report files and folders will have been generated.

Web Tracker has created the export folder defined in the **Report Parameters** dialog. Within this report folder there are four sub folders and five html files. The folder are:

- `analyses/`,
- `groups/`,
- `licenses/` and
- `users/`

These folders contain the report data. The files are:

- `accounts.html`,
- `analyses.html`,
- `groupModel.htm`,
- `licenseModel.htm` and
- `userModel.htm`

These files can be opened in web browser to view the reports. See **"Viewing Web Tracker Reports"** on page 115 for details.

Viewing *Web Tracker* Reports

To open *Web Tracker* and view *LT Analyzer* reports, double-click on the `index.htm` file in the reports directory.

To display information in a *Web Tracker* page, click on a menu item:

- **"Home"** on page 116
- **"Features"** on page 117
- **"Users"** on page 118
- **"Groups"** on page 119
- **"Analyses"** on page 120
- **"Accounts"** on page 123

- **NOTE:** Most *Web Tracker reports are cross-referenced so you can quickly interconnect with related information. Cross-references within these Web Tracker* reports are in a high-lighted font. Click once on any of these items to immediately display the related data.

  NOTE: *Within these displays you can click on any of the charts to view an enlarged version of the chart.*

Figure 55: The *Web Tracker* Menu

Home

In the *Web Tracker* menu, the menu item **Home** displays information about your database. The information in this window is read only.

Database Information

Contains database name and directory location and comments about the database.

Scope

Provides details of the Content Scope that was used in generating this set of Web Tracker reports.

Data Sources

Contains information about the log files that contained the usage data that was used in generating this set of Web Tracker reports.

Session Statistics

Contains session information:

Date Range of data in your database,

Duration Range of session hours (minimum-maximum),

Number of Sessions,

Number of Licenses,

Number of Users, and

Number of Denials for license access.

Figure 56: The *Web Tracker* Menu: Home

Features

The *Web Tracker* menu item Features displays the main Features page containing two tables, the Feature Use Summary report and the License Model report.

Each item listed under the column heading **Feature Name** in both of the tables is cross-referenced to a *Web Tracker* page that displays information about the specified license. Click on a feature name to open the *Web Tracker* page associated with the specified feature and display the following information:

- License cost information and concurrent use chart,

- User table and pie-chart,
- Average daily use table and chart,
- Average weekly use and chart,
- Level of use table and chart,
- Session length table and chart,
- Groups table and groups pie-chart,
- Individual group table and pie chart, and
- Long-sessions and resulting denials report.

This *Web Tracker* page allows you to do the following:

- Click on a username in the user table to display a corresponding **User Report**. This report contains a license table where you can select a license name that opens a **License Report**.
- Click on a group name in the group table to display a corresponding **Group Report**. This report contains a license usage table and a user usage table, from which you can access corresponding reports.

  NOTE: *Within these displays you can click on any of the charts to view an enlarged version of the chart.*

Users

The *Web Tracker* menu item **Users** displays a table containing user information under the following headings:

- **UserID** (login name)
- **Name**
- **Phone**
- **E-mail**
- **Hours**

Each item listed under the column headings **UserID** is cross-referenced to a display of information about the specified user or group:

- Click on **UserID** to open a **User Report** that contains information about the user, a table of license usage for that user and a corresponding usage pie-chart, as well as a long session report. You can access further information by clicking on an item in the column under **License** to display the corresponding **License Report**.

- In the user report, click on a **Group** to open a display of two tables that identify the license usage and user usage for that group. Click on an item in the license table under **License Name** to display a **License Report** or click on an item in the user table under **UserName** to display the corresponding **User Report**.
- Click on **E-mail** to send e-mail to the user.

  NOTE: *Within these displays you can click on any of the charts to view an enlarged version of the chart.*

Groups

The *Web Tracker* menu item **Groups** displays a table for each category in the user model. Each table information under the following headings:

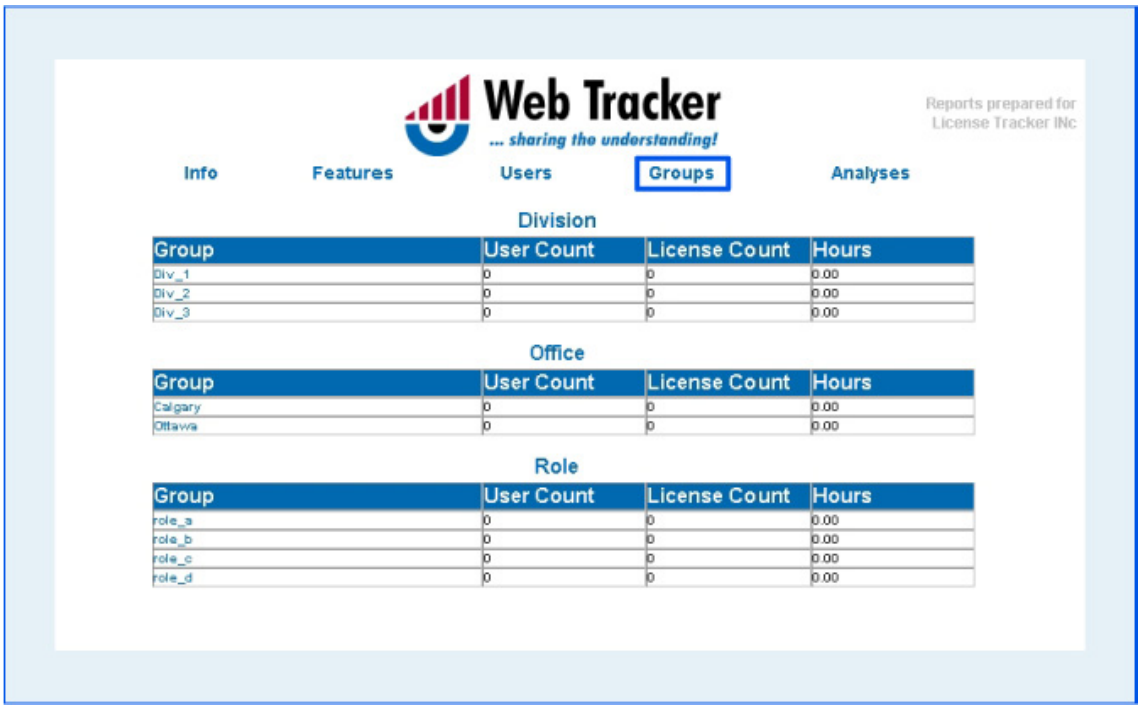
- **Group**
- **Users**
- **Licenses**
- **Hours**

Each item listed in the table under the heading **Group** is cross-referenced to a display relating to group usage information. Click on a group name to display the tables that identify license usage and user usage for that group:

- Click on an item in the license table under the heading **License** to display a *Web Tracker***License Report**. Within this report you can access a **User Report** and a **Groups Report** by selecting items in the respective tables.
- Click on an item in the user table under the heading **User** to display a *Web Tracker* page (**User Report**). Within this report you can access a **License Report** by selecting an item in the table.

  NOTE: *Within these displays you can click on any of the charts to view an enlarged version of the chart.*

Figure 57: *The Web Tracker* Menu: Groups



Analyses

In the *Web Tracker* menu, the item **Analyses** displays under four categories that address key business issues.

Basic Analyses

Refers to license usage per month.

Pay-Per-Use Analyses

Refers to usage and cost for rental licenses.

Budget Planning Analyses

Refers to group usage information and compares budgeted versus actual license costs.

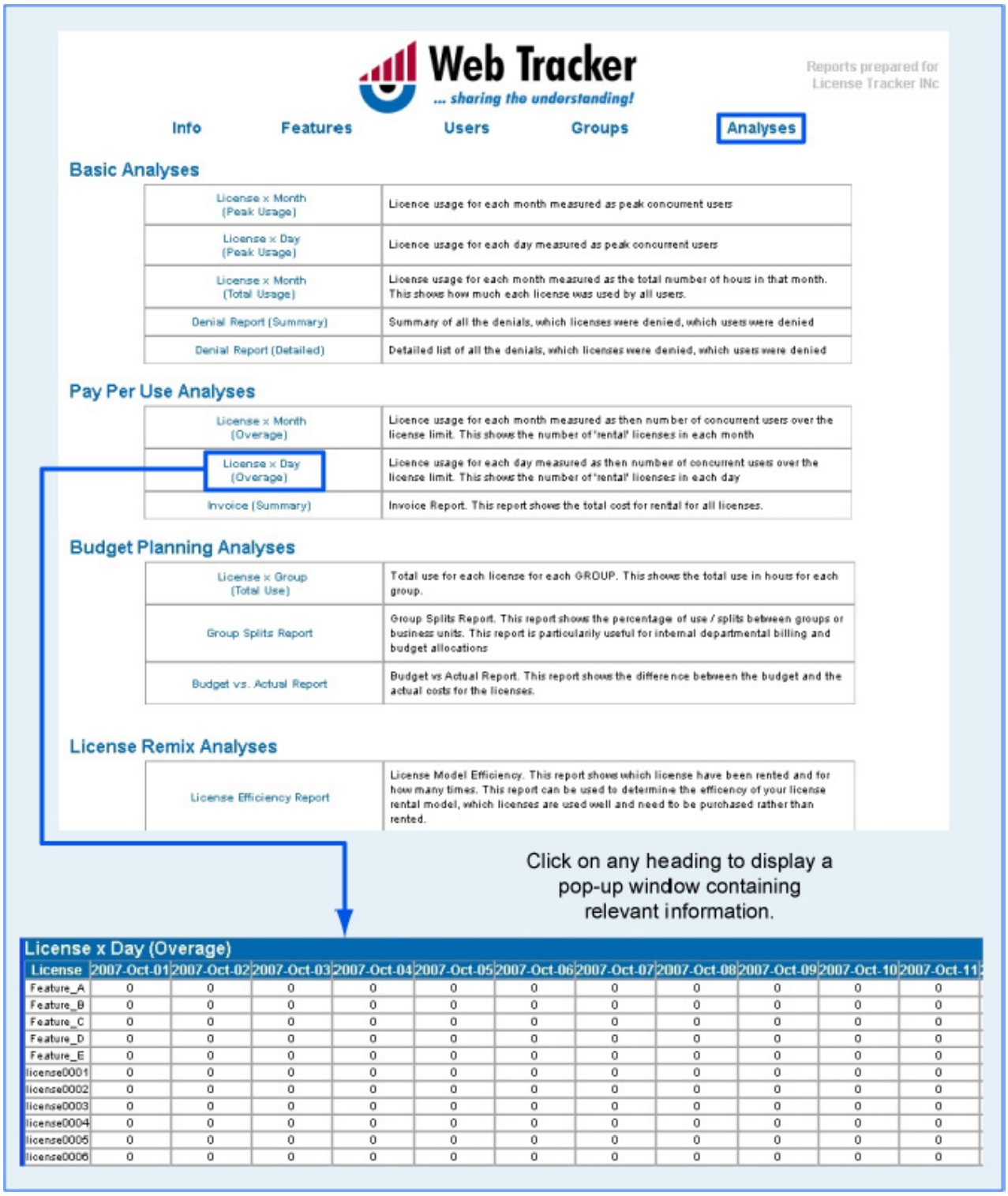
License Remix Analyses

Assesses rental licenses.

Figure 58: The *Web Tracker* Menu: Analyses

Web Tracker
... sharing the understanding!
Reports prepared for
License Tracker INc
Info
Features
Users
Groups
Analyses
Basic Analyses
License x Month (Peak Usage)
Licence usage for each month measured as peak concurrent users
License x Day (Peak Usage)
Licence usage for each day measured as peak concurrent users
License x Month (Total Usage)
License usage for each month measured as the total number of hours in that month. This shows how much each license was used by all users.
Denial Report (Summary)
Summary of all the denials, which licenses were denied, which users were denied
Denial Report (Detailed)
Detailed list of all the denials, which licenses were denied, which users were denied
Pay Per Use Analyses
License x Month (Overage)
Licence usage for each month measured as then number of concurrent users over the license limit. This shows the number of 'rental' licenses in each month
License x Day (Overage)
Licence usage for each day measured as then number of concurrent users over the license limit. This shows the number of 'rental' licenses in each day
Invoice (Summary)
Invoice Report. This report shows the total cost for rental for all licenses.
Budget Planning Analyses
License x Group (Total Use)
Total use for each license for each GROUP. This shows the total use in hours for each group.
Group Splits Report
Group Splits Report. This report shows the percentage of use / splits between groups or business units. This report is particularly useful for internal departmental billing and budget allocations
Budget vs. Actual Report
Budget vs Actual Report. This report shows the difference between the budget and the actual costs for the licenses.
License Remix Analyses
License Efficiency Report
License Model Efficiency. This report shows which license have been rented and for how many times. This report can be used to determine the efficiency of your license rental model, which licenses are used well and need to be purchased rather than rented.

Figure 59: The *Web Tracker* Analysis Function


Web Tracker
... sharing the understanding!
Reports prepared for
License Tracker INc
Info
Features
Users
Groups
Analyses
Basic Analyses
License x Month (Peak Usage)
Licence usage for each month measured as peak concurrent users
License x Day (Peak Usage)
Licence usage for each day measured as peak concurrent users
License x Month (Total Usage)
License usage for each month measured as the total number of hours in that month. This shows how much each license was used by all users.
Denial Report (Summary)
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Denial Report (Detailed)
Detailed list of all the denials, which licenses were denied, which users were denied
Pay Per Use Analyses
License x Month (Overage)
Licence usage for each month measured as then number of concurrent users over the license limit. This shows the number of 'rental' licenses in each month
License x Day (Overage)
Licence usage for each day measured as then number of concurrent users over the license limit. This shows the number of 'rental' licenses in each day
Invoice (Summary)
Invoice Report. This report shows the total cost for rental for all licenses.
Budget Planning Analyses
License x Group (Total Use)
Total use for each license for each GROUP. This shows the total use in hours for each group.
Group Splits Report
Group Splits Report. This report shows the percentage of use / splits between groups or business units. This report is particularly useful for internal departmental billing and budget allocations
Budget vs. Actual Report
Budget vs Actual Report. This report shows the difference between the budget and the actual costs for the licenses.
License Remix Analyses
License Efficiency Report
License Model Efficiency. This report shows which license have been rented and for how many times. This report can be used to determine the efficency of your license rental model, which licenses are used well and need to be purchased rather than rented.
Click on any heading to display a pop-up window containing relevant information.
License x Day (Overage)
License
2007-Oct-01
2007-Oct-02
2007-Oct-03
2007-Oct-04
2007-Oct-05
2007-Oct-06
2007-Oct-07
2007-Oct-08
2007-Oct-09
2007-Oct-10
2007-Oct-11
Feature_A 0 0 0 0 0 0 0 0 0 0 0
Feature_B 0 0 0 0 0 0 0 0 0 0 0
Feature_C 0 0 0 0 0 0 0 0 0 0 0
Feature_D 0 0 0 0 0 0 0 0 0 0 0
Feature_E 0 0 0 0 0 0 0 0 0 0 0
license0001 0 0 0 0 0 0 0 0 0 0 0
license0002 0 0 0 0 0 0 0 0 0 0 0
license0003 0 0 0 0 0 0 0 0 0 0 0
license0004 0 0 0 0 0 0 0 0 0 0 0
license0005 0 0 0 0 0 0 0 0 0 0 0
license0006 0 0 0 0 0 0 0 0 0 0 0

Accounts

In the *Web Tracker* menu, the item **Accounts** displays a list of the account included in the report. Details about name, description and current balance are displayed for each. Clicking on one of the accounts displays a report of the daily transactions of the account.

Support and Contact Information

Support Services

All customers who purchase *LT Analyzer* receive access to the User and Admin Manuals that ship with *LT Analyzer*. The manuals can be found in the `doc/` folder of the *LT Analyzer* installation.

License Tracker Inc provides premium technical support services, user forums and webinars to customers with a support contract. If you have a support contract, please go to the **LT-PremiumAssist** portal at `www.licensetracker.ca/support`.

Customers cannot access the premium support service without a contract. If you would like to purchase a support contract, please go to
`www.licensetracker.ca/support/purchase.asp`

Contact Information

License Tracker Inc can be reached by the following methods:

On the Web

http://www.licensetracker.ca

General e-mail

sales@licensetracker.ca

Support e-mail

support@licensetracker.ca

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License Tracker
... maximizing value by understanding usage